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Acknowledgement

The organising committee of the Eighth FMIC Annual International Scientific Conference gratefully acknowledges the financial and in-kind contributions of Global Affairs Canada (GAC), Agence Française de Développement (AFD), Aga Khan Foundation and other partners who have made to the conference and to various programmes. These contributions enabled a successful conference.

Message from Chief Executive Officer

On behalf of Members of the Board and the Hospital Management of the French Medical Institute for Mothers and Children (FMIC), I extend a warm welcome to all the participants of the Eighth FMIC Annual International Scientific Conference 2018.

The French Medical Institute for Mothers and Children embodies a sign of hope for the medical care of women and children in Kabul. FMIC is the first international, philanthropic, public-private, not-for-profit health institution in Kabul, Afghanistan; established in 2005 by Enfants Afghans – a project of La Chaîne de L'Espoir, a French NGO, as a four party unique public-private partnership between the Governments of Afghanistan and France, a French NGO – La Chaîne de l'Espoir and the Aga Khan Development Network (AKDN) through The Aga Khan University Hospital, Karachi (AKUH, K). FMIC is the first ISO certified hospital in Kabul, aiming to provide compassionate, accessible, cost-effective, high quality care services to the population of Afghanistan. Currently the hospital provides 160-bedded inpatient care for Children and Adults, 52 beds for maternal care, 16 beds for paediatric intensive care, 14 beds for neonatal intensive care, six operation theatres, radiology section which includes 128 slice CT-Scan and MRI capabilities, a state-of-the-art laboratory, a 24-hour pharmacy service and outpatient services for the adult population in medical and surgical specialties. FMIC also offers 17 bed adult cardiac care with a state of art cardiac catheterization laboratory. FMIC is also working toward expansion of its health services towards establishing a comprehensive medical complex in Kabul, which will serve, not only the Afghan population but Central Asia, as well as a medical centre of excellence. This expansion will occur in phases III as Expanded Medical Complex and Academic Health Sciences Centre respectively.

One of FMIC's objectives is to develop the institution into an academic centre that develops local and regional health human resources, leading to human resource sustainability. Building on this theme, FMIC has become a training centre of choice for different healthcare institution in Afghanistan. We have initiated Postgraduate Medical Education in seven disciplines, another step towards academic excellence.

FMIC has previously organised seven International Conferences, 'Paediatric Care in Afghanistan' on February 26-27, 2011; 'From Paediatric Care to Child Health' on December 1-2, 2012; 'Moving towards Quality Healthcare for Mother and Child' on October 5-6 2013; 'Strengthening Academics and Health Services in Developing Countries in Transition' on October 23-24, 2014; "Emerging Trends in Reproductive, maternal, newborn and child health in Developing Countries" on December 8-9, 2015, 'Emerging Trends of Non-Communicable Diseases (NCDs) in Developing Countries' on November 24, 2016 and 'Healthy Lives and Well-being for All' on August 5, 2017

FMIC now brings the Eighth FMIC Annual International Scientific Conference to you with the theme of "Better health: reaching everyone, everywhere" I believe that you will find the conference programme most informative and your attendance will be most worthwhile.

Once again, welcome to the Eighth FMIC Annual International Conference and our best wishes for a stimulating and rewarding experience.

Dr Nayamat Shah
Chief Executive Officer, FMIC
August 2018

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Conference Programme

Theme	Presentations
Session 1: Governance, Population and Public Health	Rush of Health Workforce to Urban Areas: Reluctance to Work in Rural and Remote Areas In Afghanistan
	Potential Impact and Cost-Effectiveness Of Rotavirus Vaccination In Afghanistan
	Contribution of the Private Health Sector to TB Case Finding in Kabul, Afghanistan: Document Review
	A Measles Outbreak Investigation and Response In Baghlan Province, December 2017 Afghanistan
	Risk Factors Associated with Acute Gastroenteritis among Children under Five at French Medical Institute for Mothers and Children, Kabul, Afghanistan
	Role of Active Contact Screening in Case Finding in Kabul from 2014-2017: A Document Review
	Armed Conflict and the Prevalence Of Post-Traumatic Stress Disorder (PTSD) among University Students in Kabul, Afghanistan
	Afghanistan Health Expenditure Time Series Data 2000-2015
	A Systematic Review of Water Treatment Strategies for Childhood Diarrhea in Low and Middle-Income Settings?
	Maternal Depression: A Serious Threat to Children’s Behavior
Session 2: Reproductive, Maternal, New-born and Child Health	To Determine Frequency and early Complications (Within 72 Hrs) in Late Preterm Neonates During Their Stay at Secondary Care Hospital of Aga Khan University
	Knowledge, Attitudes and Behaviour of Doctors Regarding Child Physical Abuse in Pakistan.
	Provision of Emergency Obstetric Care at Secondary Level in A Conflict Setting in Rural Afghanistan – Where Are The Emergency Cases?
	History of Abortion and the Risk of Subsequent Ectopic Pregnancy: A Case Control Study
	Neonatal Hemochromatosis (NH) Is A Rare and Severe Liver Disease of Mainly Intra-Uterine Onset, Characterized By Neonatal Liver Failure, Hepatic And Extrahepatic Iron Accumulation.
	Integration of Advanced Distribution of Misoprostol for Self Administration (ADMSA) in National Health System
	To Determine the Frequency of Expulsion of Copper T 380A Intrauterine Device Inserted within Ten Minutes of Delivery Of Placenta
	Maternal and Child Health (MCH) Handbook Pilot Project Implementation in Afghanistan
	Risk Factors for Stillbirth in Afghanistan: Analysis of the 2010 Afghanistan Mortality Survey
	The Association of Body Composition with Quality of Life in Adult Patients with End Stage Renal Disease on Hemodialysis Visiting A Tertiary Care Hospital in Karachi
	Acute Gastroenteritis Remains A Common Illness Among Infants and Children Throughout The World
	Trans Catheter Closure of Secondary Atrial Septal Defects

Theme	Presentations
Session 3: Clinical Practice	<p>Comparison the Outcomes of Salter Innominate Osteotomy Versus Pemberton Osteotomy for Developmental Dysplasia of The Hip (DDH) Among Children</p> <p>Surgical Ligation of PDA at a Tertiary Care Hospital in Kabul, Afghanistan</p> <p>Thoracoscopic Repair of Congenital Diaphragmatic Hernia of a Child for the First Time in Afghanistan: A Case Report</p> <p>Comparison Of Efficiency, and Outcome of Corticosteroids Therapy Alone and Immunoglobulin G (IVIG) and Corticosteroids Combined in Patients with Guillain-Barre Syndrome (GBS)</p> <p>Intrahepatobiliary Cystadenoma Mimicking Hydatid Cyst Of Liver: A Clinic Pathologic Study</p> <p>Developmental Dysplasia of The Hip, A Significant Cause of Morbidity Among Children in Afghanistan</p>
Session 4: Quality, Nursing and Allied Health	<p>Effect of Capacity Building Intervention on Patient’s Safety Improvement in Kabul Hospitals</p> <p>Challenges on-The-Way of Nursing Administration at Public Hospitals in Kabul, Afghanistan</p> <p>Assessment of Pediatric Emergency Care in Afghanistan; Gaps and Solutions</p> <p>Surgery Safety Checklist Impact on Post-Operative Morbidity and Mortality</p> <p>Effect of Mentorship Program on Improved Quality of Health Services in Remote Health Facilities of Afghanistan</p> <p>Accuracy of Malaria Rapid Diagnostic Test (RDT) Using for Managing of Probable Malaria by Microscopy Verification in Malaria Endemic Setting, Afghanistan 2017</p> <p>Prevention of Surgical Site Infection</p> <p>Ethical Issues Confronted by Medical Students In Medical Education and Training</p>
Session 5: Non-Communicable Diseases	<p>Multi-Detector Computed Tomography Evaluation of Kidneys and Renal Vascular Anatomy in Living Probable Renal Donors, Cross Sectional Descriptive Study</p> <p>Age Distribution and Types of Breast Lesions among Patients Diagnosed by Fine Needle Aspiration Cytology (FNAC) at a Tertiary Care Center in Kabul Afghanistan: A Retrospective Chart Review Study.</p> <p>Frequency and Pattern of Hematological Disorders Diagnosed by Bone Marrow Aspiration and Trepine Biopsy at a Tertiary Care Facility In Kabul Afghanistan</p> <p>Utility of Claudin-18 in Distinction between Various Subtypes of Ovarian Adenocarcinoma, and Metastatic Colorectal Adenocarcinoma Involving the Ovary</p> <p>Expression of Adiponectin Receptor 1 Is Indicative of Favorable Prognosis in Non-Small Cell Lung Carcinoma</p> <p>Distribution of Types of Leukemia and Its Socio-Demographic Characteristics among Cases Diagnosed at Clinical Laboratory of French Medical Institute for Mothers and Children (FMIC) Kabul, Afghanistan.</p> <p>Diagnostic Accuracy of “P120” in Differentiating Invasive Lobular from Invasive Ductal Carcinomas of Breast</p>
	<p>Perceptions & Experiences of Caregivers about the Routine Immunization (RI) & the Role of Mobile Phone SMS & Automated Calls in Improving the RI Coverage in Certain Districts of Pakistan: A Qualitative Study</p> <p>Performance of Cardiac Troponin I: A Comparison Between The Point of Care Testing (POCT) AQT90 FLEX and the Siemens Advia Centaur Analyzer in An</p>

Theme	Presentations
Session 6: Technology, Research and Innovation	Emergency Setting
	An Assessment on Available Laboratory Capacity in Public Hospitals, Afghanistan, 2016
	Evaluation of Radiation Protection Situation in Kabul City Hospitals' X-Ray Rooms
	Experiences and Perspectives of Extra Pulmonary Tuberculosis in 15 Provinces of Afghanistan
	Prevalence of Pulmonary Tuberculosis Among Drug Users in Afghanistan: A Cross-Sectional Study
	Successful Soft Tissue Procedure for Restoration of External Rotation in an Obstetric Brachial Palsy Patient
	Deflux (Dextranomer/Hyaluronic Acid Copolymer) Injection for the Treatment of Vesicoureteric Reflux in Children—Two Successful Cases

Scientific Sessions

Governance, Population and Public Health

Rush of Health Workforce to Urban Areas: Reluctance to Work in Rural and Remote Areas in Afghanistan

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Introduction

Globally, half of the population lives in rural areas but they are only served by one fourth of all doctors and one third of all nurses. In Afghanistan there is a geographical, skill and gender imbalance in distribution of health workforce. This study aims to determine the proportion of health workers who are willing or unwilling to work in rural areas and identify factors affecting their choice.

Methods

A cross sectional study on new graduated health workers, who were under training of public health management course in Ministry of Public Health, was conducted to collect data on their willingness and relevant reasons to be deployed in rural areas in Kabul city. Fresh graduated medical doctors, nurses, technicians and pharmacists from public medical universities and institutions were enrolled and asked to fill the self-reported questionnaires from four round of courses during 2011-2015. Data were entered using Epi Info v.7 and analysis was done using SPSS v.20.

Results

Totally 329 participants filled and returned the questionnaire of whom 62% were males and 38% were females; their mean age and standard deviation of 28 ± 4.91 years. Almost half were single and the rest were either married or engaged. More than two third were medical doctors, 12.2% were pharmacists, 8.2% were technologists and the rest were dentists (stomatology), nurses and midwives. Three fourth were willing to work in central cities(areas), 14.7% were willing to work in rural/peripheral areas and 11.4% were not sure where to work after graduation. According to their perception factors such as no exposure previously to rural areas, political concern such as security, being female, conducive environment to run personal business in rural areas, losing current income, like and loving rural weather and environment and sex of participants had significant relationship with willingness to work in peripheral settings.

Conclusion

Imbalance distribution of health workers should be rectified focusing on factors affecting their willingness to work in rural areas. This study recommends strengthening of education and training programs, enforcement of rules and regulations, provision of financial incentives, improvement of working climate and living conditions and finally focusing on human resource management.

Potential Impact and cost-effectiveness of rotavirus vaccination in Afghanistan

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Introduction

Despite great progress made in child survival in the past 20 years, 5.9 million children under five years died in 2015, with 9% of these deaths due to diarrhea. Rotavirus is responsible for more than a third of diarrhea deaths. In 2013, rotavirus was estimated to cause 215,000 deaths among children under five years, including 89,000 in Asia. As of April 2017, 92 countries worldwide have introduced rotavirus vaccination in their national immunization program. Afghanistan has applied for Gavi support to introduce rotavirus vaccination nationally. This study estimates the potential impact and cost-effectiveness of a national rotavirus immunization program in Afghanistan.

Methods

This study examined the use of Rotarix® (RV1) administered using a two-dose schedule at 6 and 10 weeks of age. We used the ProVac Initiative's UNIVAC model (version 1.2.09) to evaluate the impact and cost-effectiveness of a rotavirus vaccine program compared with no vaccine over ten birth cohorts from 2017 to 2026 with a 3% annual discount rate. All monetary units are adjusted to 2017 US\$.

Results

Rotavirus vaccination in Afghanistan has the potential to avert more than one million cases; 660,000 outpatient visits; approximately 50,000 hospital admissions; 650,000 DALYs; and 12,000 deaths, over 10 years. Not accounting for any Gavi subsidy, rotavirus vaccination can avert DALYs at US\$82/DALY from the government perspective and US\$80/DALY from the societal perspective. With Gavi support, DALYs can be averted at US\$29/DALY and US\$31/DALY from the societal and government perspective, respectively. The average yearly cost of a rotavirus vaccination program would represent 2.8% of the total immunization budget expected in 2017 and 0.1% of total health expenditure.

Conclusion

The introduction of rotavirus vaccination would be highly cost-effective in Afghanistan, and even more so with a Gavi subsidy.

Contribution of the private health sector to TB case finding in Kabul, Afghanistan: document review

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Introduction

CTB/MSH in Afghanistan has assisted the National TB Program (NTP) in implementing an Urban directly observed treatment, short-course (DOTS) approach in Kabul city, since 2009. Before 2009, private health facilities were not engaged to provide TB services. TB indicators were poor — TB case detection rate was 37%. To address these challenges, CTB/MSH projects assisted NTP to engage private health sector in TB service delivery. This assessment aims to evaluate the contribution of private health facilities in TB case finding in Kabul city.

Methods

In 2010, a baseline assessment was conducted, a memorandum of understanding with the private sector was signed, and medical staffs were trained in TB case management and TB recording and reporting formats. Supervision, monitoring, and feedback were provided to private clinics. NTP and CTB technical teams then reviewed and analyzed the TB surveillance data from 2010-2017 using standardized NTP recording and reporting tools.

Results

In 2010, six private health facilities were engaged in TB. The number of all forms TB cases notified were 2,738 TB cases in Kabul city. Of them, 133 (5%) were diagnosed by the private sector and 30 (22.5%) were bacteriologically-confirmed (BC) TB cases that treated by the private sector. In 2017, of 6,702 total TB cases diagnosed in the Kabul province, the private sector notified 985 (14.7%), of which 239 (24.3%) were BC TB cases. In seven years, Kabul urban DOTS notified 35,650 TB cases of all forms, and private hospitals contributed 3,576 (10%) of these.

Conclusion

Engaging private hospitals in TB control activities increased notification of TB cases in Kabul. We recommend applying this practice in other private hospitals and involving them in TB activities.

A Measles outbreak investigation and response in Baghlan province, December 2017 Afghanistan

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Introduction

Infectious diseases are the first leading cause of death in the low income countries, less than one in five of all people reach the age of 70, and more than a third of all deaths are among children under 15.

Measles is one of the infectious diseases which is highly contagious and remain one of the leading causes of death among young children. In 2015, there were 134,200 measles deaths globally. In Afghanistan, measles remains the 1st leading cause of outbreaks which is spreading by respiratory air drops; there were 26,642 cases and 106 deaths in 2015. Aim of this study is to present the

epidemiologic investigation of measles outbreak and response occurred in Baghlan province, Afghanistan.

Methods

It was a cross sectional study and started on first epidemiological week of 2017 in Pule Khumri & Baghlan Markazi districts of Baghlan province insecure villages. Till now this outbreak is ongoing, Epidemiological data were collected and analyzed by provincial surveillance officer and timely sharing with all stakeholders. Vaccination and responses are managing by the surveillance, and other health related stakeholders at local, provincial, regional and national level laboratory samples collected for eligible patients.

Results

Till end of year 2017, there were 1142 cases detected in both districts (Attack Rate= 0.28%), out of this 483 (42%) cases were hospitalized, with 31 mortalities (CFR= 2.7%), 41% of cases were reported among Female. There were 82% cases reported among under five age groups. The laboratory confirmed Measles by ELISA in 71% of collected samples.

Conclusion

The huge number of measles cases and outbreaks in two districts of Baghlan province, indicate the weakness of preventive and control measures, therefore improving the vaccination coverage can reduce measles cases, outbreaks and deaths.

Risk Factors associated with Acute gastroenteritis illness among infants and children under five, at French Medical Institute for Mothers and Children, Kabul, Afghanistan

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Background

Acute Gastroenteritis is the second leading cause of death in children under five years of age, globally. Acute Gastroenteritis is the leading cause of childhood morbidity and mortality, with a staggering number of 1.5 billion episodes and 1.5–2.5 million mortality estimated to occur per year among children under five years of age. Afghanistan is also one of those countries which rotavirus takes many lives of children under five years of age. Acute Gastroenteritis causes 17992 deaths in Afghanistan annually which makes 3.4% total of the global mortalities of the children under five years of age.

Methods

A case-control study design was selected to conduct the study. The study was done on 170 individuals with Acute Gastroenteritis (Cases) and 170 individuals without Acute Gastroenteritis (controls). Data collection was done by interviewing the parents through structured questionnaire. The data was analyzed using logistic regression with univariate and multivariable analyses to find out the association between Acute Gastroenteritis and certain socio-demographic and clinical predictors.

Results

The results showed that some factors such as age (OR=1.02 and 95% CI=1.006-1.03) and water source (OR=2.14 and 95% CI=1.25-3.67) were significantly associated with Acute Gastroenteritis. On the other hand, factors such as gender, immunization status, and exclusively breast feeding were not statistically significant; however, they were retained in the model due to having a biologically plausible relationship with the age and a significant Wald test. The final model was found to be a good fit with p-value >0.05.

Conclusion

The study findings suggest that there is a strong association between contaminated water and Acute Gastroenteritis and it has been also found that children under five are at high risk of Acute Gastroenteritis. Therefore, the stakeholders should develop awareness programs for parents on how to deal with contaminated water source and capacity building programs for health care in timely appropriate management of Acute Gastroenteritis.

Role of active contact screening in case finding in Kabul from 2014-2017: a document review

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Introduction

An active contact screening approach was introduced by the USAID TB CARE I project in late 2014 and implementation continued with support from the Challenge TB (CTB) project. Urban DOTS focused on active screening of households (HH) with close contacts of index TB cases and providing IPT preventive therapy for children under age five. The focus was on bacteriologically confirmed (BC) TB cases detected in public and private health facilities (HF). The aim was to increase case finding in Kabul city. The objective of this study is to evaluate the role of active contact screening in TB case notification in Kabul by urban DOTS program.

Methods

As an active strategy for contact screening, all HH contacts of pulmonary BC-TB cases were screened in their home by a health care worker. NTP and CTB technical teams reviewed and analyzed the HH contact screening data of Kabul HFs from 2014-2017 and compared them with 2014 data.

Results

In 2014, 1121 BC-TB cases were evaluated. 3847 HH contacts were registered, 347 (9%) were examined for TB and 20 (5.7%) all TB cases were detected.

In 2017, 1556 bacteriologically confirmed TB cases were evaluated. 10081 HH contacts were registered, 1132 (11.2%) were examined for TB and 155 (13.7%) all TB cases were detected. Comparing 2017 with 2014, the percentage of evaluated bacteriologically confirmed TB cases increased 26.6%, HH contacts registered increased 162%, HH Contact examined for TB increased 226% and the prevalence of all TB cases notification among HH contacts is 4.5 times higher than general population. (Table 1)

Conclusion

The study revealed that active HH contact screening improved TB case finding among those HHs living in close contact with index cases, so it is recommended to implement active HH contact screening in the similar settings.

Armed conflict and the prevalence of Post-Traumatic Stress Disorder (PTSD) among university students in Kabul, Afghanistan

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Introduction

Recent research has revealed concerns about prevalence of Post-Traumatic Disorder (PTSD) among university students in conflict zones. Afghanistan is dealing with conflict and terrorism since decades and mental health disorders especially PTSD is prevalent among its population. The present study was designed to determine the prevalence of PTSD and its association with exposure to conflict traumatic events among a sample of university students in Kabul, Afghanistan.

Methods

A cross-sectional design with systematic random sampling was used to collect data from a sample of 388 students in three major governmental universities in the capital city. Using an adapted version of Harvard Trauma Questionnaire (HTQ), exposure to traumatic events and symptoms of PTSD were assessed. Chi-square tests and bivariate regressions were performed to show the associations and impact of independent variables on dependent variable.

Results

The prevalence of PTSD was reported among 278 (71.6%) subjects of the sample. PTSD cases were higher among male gender. 10 out of 16 war-traumatic events were significantly associated with PTSD. Age showed to be correlated with PTSD but no association between PTSD and other demographic features were observed.

Conclusion

Most of the participants were exposed to conflict traumatic events during their lifetime. Our findings indicate on an alarming rate of PTSD, pointing at the burden of this disorder among

young generation. Effective public health services and psychological interventions are needed to combine medical, social and psychological approaches in order to address the problem.

Afghanistan Health Expenditure Time Series data 2000-2015

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Introduction

National Health Accounts focus on analysis and tracking of health expenditure, health financing and funding to incorporate macroeconomic trends among the institutions and organizations that constitute the health system. Time series data is the calculation of health expenditure in a country over a period of time. This report covers Afghanistan health expenditure from 2000-2015. The report provides information on financing schemes, sources where the money come from and for which services. It helps policy makers and decision influencers as well as other stakeholders to understand the pattern of total health spending over a period of time and devise appropriate health financing strategy to achieve Universal Health Coverage Goals of efficiency, equity and financial risk protection.

Methods

Production of Afghanistan health expenditure time series, followed the method of international classifications of Health Accounts and system of health Accounts 2011. The data is collected from all partners (financiers, agents, and service providers) both on and off budget. It also estimates household out of pocket expenditure collected during the household surveys. The team produced separate spreadsheet for each year considering the sources of the money, financing scheme and where the money is spent and on what services. Lastly it was compared with macroeconomic data

Results

The study shows that current health expenditure as percentage of GDP is fluctuating during the years 2000-2015. However, health expenditure was around 9.4% of GDP in 2002, it increased to 11% in 2006 and then reduced to approximately 10.3 % of GDP in 2015.

However, household out of pocket health spending as percentage of GDP declined from 90% of total health expenditure in 2002 to 62% in 2015. It is absolutely higher than peer countries.

Direct foreign transfers in the country have not been consistent. However, the expenses on healthcare financed by the direct transfers periodically increased, the institutions also reported instances of reduced expenses. The study suggests that; however, the total health expenditures increased each year, the composition of financing sources haven't changed much. Place largest share of total health expenditure on households increases efficiency and equity concerns.

Conclusion

This time series report summarizes key health expenditure patterns and trends in Afghanistan and illustrate the potential of the new database to inform thinking about financing reforms to progress towards achieving Universal Health Coverage Goals of efficiency, equity and financial protection.

A systematic review of water treatment strategies for childhood diarrhea in Low and Middle-Income Settings?

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Introduction

During the year 2015 in, 525,977 under 5 deaths occurred due to diarrhea in low-middle income.^[1] In the same year in Pakistan, there are 39,484 deaths of Under 5 children due to diarrhea. Childhood diarrhea is one of the underlying cause of malnutrition. Diarrhea is primarily a water born disease. Contaminated drink water is the main source of harmful microbes in the human body. However, evidence on the effectiveness of intervention on improved water supply are sparse and not conclusive.

Methods

We searched published literature in PubMed, Cochrane, Health System Evidence and grey literature, World Health Organization database, Water and Sanitation Programs, Water Aid and United Nation Children Funds database. Our objective was to identify water treatment interventions at supply source and at point of use. To review the effect of identified water treatment interventions on reducing diarrhea in children under five in low and middle-income settings. We included those studies that evaluated the effect of water treatment interventions such as chlorination, flocculent and water filters (solar disinfection, bio-sand & ceramic filters in reducing of diarrhea in children under five. The included studies conducted in low and middle-income settings. Randomized Control Trails (RCTs) and quasi-experiment or before after designs were considered.

Results

We included 32 studies in the systematic review and Meta-analysis. Out of these, 26 were RCTs and 6 were Quasi-Experiments. Pooled analysis showed reduction of diarrhea by water treatment interventions of point-of-use. Water filtration diarrhea risk reduction ratio is 0.47 (95% CI: 0.36,0.62) and water disinfection is 0.69 (95% CI: 0.60,0.79). Supply source water treatment interventions, handpump diarrhea risk reduction ratio is 0.97 (95% CI:0.67, 1.41) and Chlorination & Improved supply diarrhea risk reduction ratio is 0.95 (95% CI: 0.35,2.60) & (0.47, 1.94) respectively.

Quality ratings were low or very low for most studies, and heterogeneity was high in pooled analysis. Improvements to the water filtration and water disinfection at source did not show significant effects on diarrhea risk which again is a matter to be studied further to explore its authenticity.

Conclusion

We provided evidence that point-of-use water treatment interventions have significant effect on reduction of childhood diarrhea. This would help policy makers for making choices in different identified point of use interventions and taking appropriate decision for areas where pipe water supply is not feasible in low and middle-income settings of Pakistan.

Maternal Depression: A Serious Threat to Children's Behaviour

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Introduction

Maternal depression in developing countries is regarded as a risk factor for poor growth and development in children. Depressed mothers show less warmth, inattentiveness and unresponsiveness that negatively influence the developing mind and behaviour in young children. Therefore, we aim to examine this relationship between maternal depressive symptoms and children behaviour in primary school going children from community setting in Karachi, Pakistan.

Methods

This cross-sectional study employed interview with 250 mothers of children aged 4-8 years selected randomly from two community based schools in Karachi, Pakistan. The Edinburgh Depression Scale (EDS) was used to screen for mothers' depressive symptoms and Strengths and Difficulties Questionnaire (SDQ) was used to assess children behaviour. *Pearson's* chi square test was done to see the association between depressive symptoms and children's behaviour.

Results

Forty-four percent women scored ≥ 13 on EDS based on validated cut-off. High depression score was significantly associated with nuclear family status. Employing SDQ, 208 (83%) children aged 4 to 8 years were having the behavior problems. High level of depression was associated with child behavioral problems (p -value < 0.01). Children of depress mothers significantly rated high on emotional problems, conduct problems and hyperactivity subscales on SDQ (p -value < 0.001).

Conclusion

Our study findings showed that maternal depression was associated with behavioural problems in children from Karachi, Pakistan. Contact with health care worker is an area of opportunity for early screening of mothers after childbirth for depressive symptoms. Evidence shows that varied intervention such as social support system, group therapy, stress management, home visit can be offered to prevent depression among mothers. Reduction in maternal depression would not only help mothers but would also improve child health and influence child's future development and socio-economic status.

Reproductive, Maternal, New-born and Child Health

To determine frequency and early complications (within 72 hrs) in late preterm neonates during their stay at secondary care hospital of Aga Khan University

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Introduction

The burden of prematurity comprised of 12.7% of the live births, where late preterm accounts for approximately three fourth (73%) of overall prematurity worldwide. Frequency of preterm birth are increasing worldwide and there is evidence that this increase is mostly due to "late preterm" births which is of all preterm births. As a consequence, they are at higher risk of developing complication and higher rates of hospital readmission (17.9%) during the neonatal period than do term infants. The objective of the study is to determine the frequency of late preterm birth in secondary care hospital and also to look for early complication like respiratory distress, hypoglycemia, sepsis, neonatal jaundice and Hypothermia in late preterm.

Methods

Study Design is case series study. Newborns delivered during study period will be included in study to determine frequency of late preterm neonate. Demographic features i.e., age, gender, gestational age, birth weight will be recorded. All late preterm will be observed for early complication within 72 hours of birth including signs of neonatal sepsis, Respiratory distress syndrome, Hypothermia, hypoglycemia and Hyperbilirubinemia. Effect modifiers will be calculated through stratification of age to see effect of these on outcome variable. Post stratification apply Chi square test taken $P < 0.05$ as significant.

Results

There were 1696 (86.7%) term and 217 (13.3%) preterm live singletons. There were 217 (12.7%) late preterm making the rate of late preterm at 225 (96.4%) of all preterm singletons. Among them respiratory morbidities were diagnosed in 24%, Hypoglycaemia was 13.8%, Evaluation for sepsis in 9.2%, phototherapy for jaundice was required in 17.5% and Hypothermia was diagnosed in 6.0% infants admitted in secondary care hospital.

Conclusion

Late preterm neonates are the major subgroup of preterm delivered at secondary care hospitals and are at higher risk of morbidity and birth hospitalization, therefore treating late preterm as term infants should be avoided.

Knowledge, attitudes and behaviour of doctors regarding child physical abuse in Pakistan

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Introduction

The objective of the study was to assess the knowledge, attitudes and behaviour of medical and dental doctors in identifying and reporting child physical abuse.

Methodology

A cross sectional study was done during January till June 2018 on medical and dental doctors practicing in public and private hospitals across Pakistan. A pre-tested and structured questionnaire using simple random sampling technique was administered. The knowledge about the social indicators of child physical abuse, attitude towards child physical abuse and the actions taken by the medical and dental doctors when they suspect a case of child abuse was determined. Descriptive analysis was done for all independent variables using SPSS version 22. Chi-square test was used to determine the association of knowledge about the child physical abuse between male and female doctors. P-value < 0.05 was considered as statistically significant.

Results

Out of total 575 doctors, 347 (60.3%) were male and 228 (39.7%) female doctors. The majority of doctors 446 (77.6%) work in private hospitals, 384 (66.8%) having less than ten years of experience and only 99 (17.2%) doctors had received formal training of child abuse. Regarding doctor's knowledge about the social indicators of child physical abuse, only 149 (25.9%) of doctors agreed that children who have been physically abused will usually tell someone soon after the abuse. It was statistically significant between sex ($P < 0.05$). For doctor's attitude towards child physical abuse, 450 (78.3%) doctors strongly agreed to the importance of detecting and reporting child physical abuse while majority of doctors 563 (97.9%) did not took any action when suspecting a case of child abuse.

Conclusion

The study revealed that there is sufficient knowledge about the child physical abuse among doctors. Although the attitude of the doctors was positive regarding child physical abuse, a large proportion remain silent on suspicion of child physical abuse.

Provision of Emergency Obstetric Care at secondary level in a conflict setting in rural Afghanistan – where are the emergency cases?

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Introduction

Provision of Emergency Obstetric Care (EmOC) reduces maternal mortality and should include three components: Basic EmOC offered at primary care level, Comprehensive EmOC (CEmONC) at secondary level and a good referral system in-between. In a conflict-affected province of Afghanistan (Khost), we assessed the performance of an MSF run CEmONC hospital without a primary care and referral system. Performance was assessed in terms of hospital utilisation for obstetric emergencies and quality of obstetric care.

Methods

A cross-sectional study using routine programme data (2013-2014).

Results

Of 29,876 admissions, 99% were self-referred, 0.4% referred by traditional birth attendants and 0.3% by health facilities. Geographic origins involved clustering around the hospital vicinity and the provincial road axis. While there was a steady increase in hospital caseload, the number and proportion of women with Direct Obstetric Complications (DOC) progressively dropped from 21% to 8% over two years. Admissions for normal deliveries steadily increased. In-hospital maternal deaths were 0.03%, neonatal deaths 0.9% and DOC case-fatality rate 0.2% (all within acceptable limits).

Conclusion

Despite a high and steadily increasing caseload, good quality Comprehensive EmOC could be offered in a conflict-affected setting in rural Afghanistan. However, the primary emergency role of the hospital is challenged by diversion of resources to normal deliveries that should happen at primary level. Strengthening Basic EMOC facilities and establishing an efficient referral system are essential to improve access for emergency cases and increase the potential impact on maternal mortality.

History of Abortion and the Risk of Subsequent Ectopic Pregnancy: A Case Control Study

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Introduction

Ectopic pregnancy (EP) is defined as a pregnancy in which implantation occurs outside the

endometrial cavity. The incidence of EP has been accounted for 1-2% of all reported pregnancies. Despite some suggested risk factors, there is no well-defined etiology for EP.

Objectives: To assess the association between abortion and ectopic pregnancy risk in women living in Kabul. Also we studied the association of the history of surgery, prior EP, age, gravidity and parity with EP.

Methods

This case-control study was performed at Kabul's tertiary maternity hospitals. A total of 158 women with the diagnosis of EP were assigned in case group and 298 women with intrauterine pregnancy in the control group.

Results

Mean (SD) age of women in the case group was 27 (± 6) years while in control it was 27 (± 5.5) years. We found a significant association between history of abortion and EP (Adj. OR=1.57; 95%CI: 1.02, 2.42). Having history of pelvi-abdominal surgery was a risk factor for EP with adjusted OR 1.94 (95%CI: 1.15, 3.30). In this study we found an increasing risk of EP in women of 35 years or older compared to younger women (Crude OR=2.26; $p= 0.024$). In women complaining of previous EP the chance of its recurrence was increased (Crude OR= 9.64; 95%CI: 1.1, 83.2). No association of gravidity and parity was found with EP incidence.

Conclusion

In this study we found a statistically significant association between abortion and EP. In addition, history of surgery was founded as a risk factor for ectopic pregnancy. In case of having a previous EP probability of its recurrence well be increased. Women of advanced age, having other potential risk factors well be facing higher risk of EP. Detection of EP risk factor and conducting risk-reduction counselling before conception in high-risk patients can lead to early diagnosis and management of EP.

Key words: Ectopic pregnancy · Abortion · Parity · Gravidity · Surgical history

Neonatal Hemochromatosis (NH) is a rare and server liver disease of mainly ultra-uterine onset, characterised by neonatal liver failure, hepatic and extrahepatic iron accumulation.

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Introduction

Neonatal hemochromatosis (NH) is a rare and severe liver disease of mainly intra-uterine onset, characterized by neonatal liver failure, hepatic and extrahepatic iron accumulation. This leads to an altered iron metabolism with resulting siderosis. The disease represents the most common cause of liver failure in neonates and is also the most common indication for neonatal liver transplantation. In order to diagnose neonatal hemochromatosis, there are some criteria that should be taken into account such as positive family history, high serum ferritin levels, high serum alpha-fetoprotein levels and siderosis demonstrated by histology or with magnetic resonance.

Methods

We present a case of a 22-day-old female baby with 3.4 kg weight, SVD born Term GA, normal birth event, direct breast H/O two days' fever and abdomen distention. Neonate was admitted to hospital with provisional diagnosis of N. Sepsis, initial physical findings were baby looked ill, fibril, abdomen distention and hepatomegaly. Initial investigation shows raised SGPT, prolonged PT, PTT with THROMBOCYTOPENIA; although Bc/s was negative, CRP, Hb and WBC were normal. Day by day baby was getting worse. On day three of admission we did investigation for fulminant hepatic failure, alpha-fetoprotein and ferritin which was very high: ferritin 91400ng/ml and alpha-fetoprotein 1610iu/ml. The patient was diagnosed with Neonatal Hemochromatosis that is extremely rare.

Results

NH is a prominent cause of severe fetal liver injury and should be suspected in cases of late intrauterine fetal demise in the absence of other definable cause. It should be suspected in any very sick new-born with evidence of liver disease as it is the cause of most cases of new-born liver failure and/or cirrhosis. Diagnosis is confirmed by demonstrating extrahepatic siderosis. However, there is a spectrum of NH-related phenotypes that can include minimally affected siblings of affected babies and acute liver failure in the absence of extrahepatic siderosis.

Conclusion

NH appears to be the manifestation of maternal all immunity in many cases. The risk for recurrence in subsequent offspring of an affected woman is very high, though prevention of recurrent severe NH by gestational treatment using IVIG has been very effective. Thus, it is imperative to diagnose NH in an affected fetus or baby through proper study including autopsy. Ongoing research should lead to better approaches to diagnosis and treatment

Integration of Advanced Distribution of Misoprostol for Self Administration (ADMSA) in national health system

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Introduction

Afghanistan has a MMR of 1291 per 100,000 live births (ADHS, 2015). Hemorrhage is the leading cause of maternal death, accounting for 56% of all maternal deaths. The facility-based delivery rate has steadily risen over the last several years; still only 48% of women deliver with a skilled provider (ADHS, 2015). In the absence of a community component for postpartum hemorrhage (PPH) prevention, this leaves the large majority of women unprotected against the leading cause of maternal death. To fill this gap, a PPH Prevention pilot program was conducted from 2005 to 2007 to determine program effectiveness as the community-based Advanced Distribution of Misoprostol for Self Administration (ADMSA) which was later expanded to 20 districts in five provinces in 2010 to 2012.

Based on the results of aforementioned studies and WHO recommendations, the MoPH has decided to proceed with national scale up of PPH prevention intervention.

Methods

Research programs conducted in 2006-2007 and 2010-2012 to assess the safety, acceptability, feasibility and program effectiveness of ADMSA. National scale up plan developed and initiated its

implementation in four provinces by RMNCAH and CBHC departments of MoPH through GCMU and SEHAT implementers with technical and financial support of USAID funded HEMAYAT project.

Results

During scale up of PPH prevention, 7808 women were counselled on prevention of PPH and received Misoprostol tablets at eight months of their pregnancy. 3940 possible PPH cases were averted through ADMSA in 20 districts of Badakhshan, Balkh, Faryab and Jawzjan provinces. Advanced distribution of misoprostol for self-administration at homebirth is included in RMNCAH strategy and SEHAT contracts.

Conclusion

Advanced Distribution of Misoprostol for self-administration was included in SEHAT contracts as one of the high impact interventions in reduction of maternal mortality ratio.

To Determine the Frequency of Expulsion of Copper T 380A Intrauterine Device Inserted Within Ten Minutes of Delivery of Placenta

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Introduction

Annually nearly 80 million unintended pregnancies are projected worldwide. In developing countries more than one-third of all pregnancies are considered unintended and about 19% end up in abortion, which are most often unsafe accounting for 13% of all maternal death globally. The intrauterine contraceptive device (IUCD) is a safe, highly effective, long-lasting means of contraception. The objective of this study was to determine the frequency of expulsion of Copper T 380A intrauterine device inserted within ten minutes of delivery of placenta after vaginal & cesarean delivery.

Methods

This study was conducted in gynecology & obstetrics unit-IV Sir Ganga Ram hospital Lahore. The duration of study was six months. Study design was descriptive case series. Sampling technique used was non probability purposive technique. A sample size of 120 clients is calculated with 95% confidence interval and 6% margin of error with expected efficacy as 12.3%.

Results

A total of 120 cases fulfilling the inclusion/exclusion criteria were enrolled to determine the frequency of expulsion of Copper T 380A intrauterine device inserted within ten minutes of delivery of placenta. Age distribution of the patients was done which shows that 57.5% (n=69) were between 18-25 years of age while 42.5% (n=51) were between 26-35 years of age, mean+sd was calculated as 25.69+4.51 years. Frequency of mode of delivery was recorded as 67.5% (n=81) with SVD and 32.5% (n=39) were delivered through cesarean section. Patients were distributed according to parity which shows 46.67% (n=56) had 1-3 paras and 53.33% (n=64) had >3 paras. Frequency of expulsion of copper T 380 A intrauterine device inserted within ten minutes of delivery of placenta was recorded as 12.5%(n=5) while 87.5%(n=105) had no expulsion. Stratification for expulsion of copper t 380a with regards to mode of delivery shows that out of 5 expulsion cases, 3 were delivered through spontaneous delivery and 2 were through cesarean section, p value was calculated as 1.00. Stratification for expulsion of copper T 380A with regards

to parity shows that out of 5 expulsion cases, 4 were 1-3 paras and 1 had >3 paras, p value was calculated as 0.18.

Conclusion

We concluded that the frequency of expulsion of Copper T 380A intrauterine device inserted within ten minutes of delivery of placenta is not higher in comparison to the other studies. However, continuing of this practice may be more applicable in our country where delivery may be the only time when a healthy woman visits health care personnel.

Maternal and Child Health (MCH) Handbook pilot project implementation in Afghanistan

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Introduction

Afghanistan's Maternal and Child (MCH) handbook was developed in 2016-2017 by technical working group in Ministry of Public Health with the technical and financial support of the Japan international Cooperation Agency (JICA), UNICEF, WHO, and other partners. The following are the main objectives:

Share progress of the project implementation with Ministry of Public Health officials, partners and donors. And to see provision and integration of maternal and child health services in area of midwifery, immunization and nutrition.

Methods

Our report is based on the monitoring data and training workshops information including observation of mothers/clients visiting the health facilities at pilot project area. During project implementation, joint and individual monitoring visits have been done. We have collected data, and observed mothers/clients who received MCH handbooks during monitoring from 8 health facilities. Meanwhile before launching of the project pre- and post-tests have done of the training participants.

Results

According to health facility reports, 155 health care providers oriented and trained, 11 monitoring missions conducted and 18,000 MCH handbooks distributed by midwives, vaccinators and nutrition councillor. The pre-and post-tests results revealed that knowledge of trained health care providers on MCH handbook has been improved on average by 18%.

Conclusion

The project monitoring findings indicate that this initiative is acceptable and useful to patients/clients, as well as health care providers for usage during follow-up visits from the public health facilities. Evaluation of MCH handbook which has been completed recently also revealed, that it helps mothers and health care providers in term of having more knowledge for service provision and uptake.

Risk factors for stillbirth in Afghanistan: analysis of the 2010 Afghanistan Mortality Survey

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Introduction

Stillbirth rates in Afghanistan have shown little decline in the past two decades with no data to understand why these deaths continue to occur at such a high rate. Across most low-income settings, there is limited nationally representative data to understand risk factors for stillbirth, as many births occur in home. In most national, population-based surveys in these settings, data collection for stillbirths is very limited. Women's health care utilisation and complications during pregnancy and delivery are rarely collected, and this is a major limitation to understanding country-specific causes and risk factors. The 2010 Afghanistan Mortality Survey is one of the few surveys with such data available for stillbirths. The objectives of the study were to examine the socio-demographic, maternal and health care utilisation factors associated with stillbirth in Afghanistan.

Methods

We used data from the 2010 Afghanistan Mortality Survey, a nationally representative household survey. The analysis included 17,374 women aged 12-49 years with a pregnancy outcome in the preceding five years (17,012 live births, 362 stillbirths). We restricted the analysis to women's last pregnancy, and examined the association between socio-demographic characteristics, maternal, foetal, and health care utilisation factors with stillbirth using multivariable logistic regression. Stillbirth was defined as a pregnancy loss at ≥ 7 month.

Results

We found that, after adjusting for confounders, the odds of having a stillbirth was over three times higher among women residing in the Central Highlands region (aOR: 3.2; 95%CI: 1.47-7.23) and over 13 times higher among the Nuristan ethnic population (aOR: 13.6; 95% CI: 3.6-51.4). Previous pregnancy loss (aOR: 2.95 95%CI: 1.95-4.44), multiple pregnancy (aOR: 3.67; 95% CI: 1.90-7.08) and being a first pregnancy (aOR: 2.51; 95%CI: 1.56-4.03) was also associated with an increased the odds of stillbirth. Women not receiving any antenatal care had 3 times the odds of stillbirth (aOR: 3.13; 95% CI: 1.84-5.35). Complications during pregnancy including bleeding, possible infection and reduced fetal movements increased the odds of stillbirth. Stillbirth was also associated with delivering in a health facility (aOR: 1.81; 95% CI: 1.29-2.55) and reduced foetal movements during delivery (aOR: 18.8; 95% CI: 6.69-18.7).

Conclusion

Understanding why stillbirth risk is so high among particular regions and ethnic groups in Afghanistan will be important to reducing the overall rate. Access to health care is likely to be playing a role and may require targeted interventions to reduce stillbirths. Complications during pregnancy and delivery need to be identified and managed appropriately by encouraging use of antenatal care and timely care seeking for problems during pregnancy.

Incidence and antimicrobial pattern of extended spectrum B-Lactamase (ESBL) producing Enterobacteriaceae Isolated from the cases of neonatal septicaemia

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Introduction

ESBL producing Enterobacteriaceae led to serious concern in septicemic neonates due to high resistance against commonly used antibiotics. The study was aimed to find out the incidence and antimicrobial pattern of extended spectrum B-Lactamase ESBL producing Enterobacteriaceae Isolates in septicemic neonates who were admitted to the NICU (Neonatal Intensive Care Unit) of FMIC (French Medical Institute for Mothers and Children).

Methods

The study was conducted at clinical laboratory, French Medical Institute for Mothers and Children. Data of positive blood culture samples from all septicemic neonate who were admitted to the NICU of FMIC during a period of one year from May 2017 to June 2018 were retrospectively enrolled in the study. As per routine workup for the isolation of all pathogen bacteria standard microbiological methods were followed. Biochemical identification of gram negative bacilli was achieved using API (Analytical Profile Index) 10S or 20E (bio Merieux, France). The isolated strains were tested for their susceptibility against commonly used antibiotics and for ESBL (Extended-Spectrum β -Lactamase) production.

Result

Out of (n=110) positive cases, 68 (61.8%) were gram negative rods and 32 (38.2%) were gram positives. Among all gram negatives 40 (58.8) isolates were Enterobacteriaceae, of which 31 (77.5%) cases were ESBL positive. A greatest resistance to B-Lactam and non B-Lactam antibiotics was observed in ESBL producing isolates than non ESBL producers. Combination of B-lactam and B-lactamase inhibitors particularly Piperacillin Tazobactam were mostly effective against both ESBL and Non ESBL producers.

Conclusion

This study indicates that, a very high, 77.5% of Enterobacteriaceae isolates were ESBL producers and highlights an increasing resistance to commonly used antibiotics. Therefore, there is a need for continuous investigation for antibiotic susceptibility and to formulate therapeutic strategies to control infections. We suggest that more studies should be done with large sample size.

Clinical Practice

The Association of Body Composition with Quality of Life in Adult Patients with End Stage Renal Disease on Hemodialysis visiting a Tertiary Care Hospital in Karachi

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Introduction

In hemodialysis patients a large body size is associated with poor quality of life (QOL). It is not clear whether body fat or muscle mass confers a better QOL. In this study, we hypothesized that increased muscle mass and lower body fat percentage are independently associated with a better QOL score.

Methods

An analytical cross-sectional study was conducted on 72 patients, visiting Aga Khan University Hospital (AKUH) twice or thrice per week for HD. These patients underwent a detail assessment of body composition using Bio Scan. Socio-demographic and medical related information was also collected. Quality of life (QOL) was assessed using WHOQOL-BREF questionnaire. Multiple linear regression was carried out for statistical analysis.

Results

Out of 92 ESRD patients 72 were recruited. Out of all 4 domains of QOL (physical health, physiological health, social relationship and environmental domain) the mean QOL of environmental domain scored highest 61.43 ± 12.96 . HD patients had a mean age of 57.9 ± 14.2 years. Around 52.78% were male, where majority 49 patients were on thrice per week HD. Patients who were employed, the mean estimated QOL score was higher as compared to unemployed (7.77, 95% CI: 0.41, 15.12). With every one-unit increase in muscle mass, the mean estimated QOL score increases (27.93), whereas with every one percent increase in body fat percentage, the QOL score decreases (10.86). Among all ESRD patients, married female had a decreased QOL score.

Conclusion

Finding shows the assessment of QOL along with body size and compositions are valuable in clinical practice for health professionals to advise their patient accordingly. In future controlled trials are warranted to examine weather intervention to improve nutrition status along with muscle mass improve QOL in HD patients.

Acute gastroenteritis remains a common illness among infants and children throughout the world

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Introduction

Acute gastroenteritis remains a common illness among infants and children throughout the world. It is estimated that each year 2.5 billion cases of diarrhea occur among children under five years of age; the estimates suggest that overall incidence has remained relatively stable over the past two decades. The youngest children are more vulnerable to diarrhea meaning that incidence is highest in the first two years of life. Diarrhea causes 1.5 million deaths each year worldwide. Three quarter of deaths occur in Africa and southeast mainly in 15 countries. Afghanistan has fourth highest mortality rate among them. Dehydration is the leading cause of mortality and hospitalizations among young children suffering diarrhea. The aims of this study were to understand the proportion and to identify risk factors associated with severe dehydration among children less than two years old with acute diarrhea.

Methods

This study utilized an analytic cross-sectional study design. A total of 236 children less than two years with acute gastroenteritis who were treated either on inpatient or outpatient basis at French Medical Institute for Mothers and Children during June and July 2017. Children with malnutrition, metabolic diseases, Malabsorption syndromes, chronic and persistent diarrhea and children with suspected or proven immunodeficiency were excluded from study. Promotion of severe dehydration was analysed. In order to identify factors associated with severe dehydration among children less than two years, univariate and multivariate analysis were conducted.

Results

This study found the proportion and several risk factors of severe dehydration among children less than two years with acute diarrhea. Overall proportion of severe dehydration was 14.8%. Children's younger age was a strong risk factor for developing severe dehydration (p -value <0.001), as children aged less than 6 months were 12 times more prone to severe dehydration compared to children aged 12-24 months (OR=12.19; CI: 2.73, 54.35). Furthermore, male gender (Crude OR= 2.49, CI: 1.04, 7.03), lack of exclusive breastfeeding during initial six months of life (Crude OR= 10.9; CI: 3.74, 32.25), lack of breastfeeding as current feeding practice (OR= 3.51; CI: 1.63, 7.57), illiteracy of mother/care givers (OR= 4.14; CI: 1.69, 10.16) and use of antibiotics within last two weeks (OR= 3.51; CI: 2.03-6.07) were other risk factors for developing severe dehydration.

Conclusion

The findings of current study conclude that younger age is a significant risk factor for developing severe dehydration. Moreover, male gender, illiteracy of mothers/caregivers, lack of exclusive breastfeeding for the first six months of life, use of antibiotics within last two weeks, and lack of breastfeeding as current feeding practice were other risk factors for developing severe dehydration. Family education regarding effects of inappropriate use of antibiotics, giving special attention to home management of diarrhea, seeking medical attention for younger children, importance of exclusive breastfeeding for initial six months of life and then continuation of breastfeeding till two years of age and designation of special programs for illiterate mothers to improve their general knowledge about diarrhea are main recommended points of this study.

Trans-catheter Closure of Secondary Atrial Septal Defects

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Introduction

Purpose of the study was to analyse the short-term result of trans catheter closure (TCC) of secondary atrial defects (ASD).

Methods

54 Patient aged 2-60 years (mean -16,4 years) were treated at Republican Scientific Center for Cardiovascular surgery during the period from September 2010 and January 2016, male were 14, females 40, Pediatric and adult patient ratio was 30/24, Selection of patient to TCC based on following ECHO criteria: absence of high pulmonary hypertension, left to right shunt, ASD diameter less than 40mm, absence of another congenital heart abnormalities and presence of all rims of atrial septum. All procedures were performed at cath-lab equipped by digital angiographic system "INFINIX" (Toshiba, Japan) underwent standard Amplatz technique. Local anesthesia used in 24 case (adult patients) 30 children were operated under general anesthesia, 31 patient underwent 2-staged procedures: initially the invasive measurement of ASD by using of sizing balloon was preformed followed by stage closures of ASD, in 23 cases both sizing and ASD closure were done simultaneously.

Results

In 53 patient ASD occluder's implanted successfully. occluders sizes varied from 6 to 40mm and directly depended on ASD shape and size, proper position of occluder was checked by both traction maneuver done by operator and ECHO control. Migration of occluder in to pulmonary artery occurred in 1 case; this patient presented large ASD (near to 40mm). Although intraoperatively device was positioned accurately but after 30 minutes occluder dislocated and the patient underwent open heart surgery. one patient died after 24 hours of procedure due to heart insufficiency, majority patient discharged on the next day.

Conclusion

Our experience demonstrates very high effectiveness and relatively low risk of endovascular closure of ASD by Amplatz technique.

Comparison between the Outcomes of Salter Innominate Osteotomy versus Pemberton Osteotomy for Developmental Dysplasia of the Hip (DDH) among children at FMIC, Kabul, Afghanistan

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Introduction

Developmental Dysplasia of the Hip (DDH) is one of the most common orthopaedic problems seen during childhood which includes subluxation, dislocation and dysplasia of the hip. The treatment of DDH after walking age is surgery in order to have concentric reduction and stable hip. The aim of this research study is to compare outcome of Salter Innominate Osteotomy versus Pemberton Osteotomy with regard to complication rate, length of stay, family satisfaction level, Acetabular index and clinical outcome among children with DDH at FMIC, Kabul, Afghanistan.

Methods

A retrospective Cohort study design was employed on 220 patients who underwent either Salter or Pemberton Osteotomy at FMIC. The data was collected from the available recorded files during the period of 2010 up to 2016 and called to 220 patients' families to validate the data. Chi-square test of independence and T-test for two independent samples were run to determine an association between two categorical variables and compute mean difference between categorical and continuous variables for two types of surgical procedure respectively. All the ethical principles were followed throughout the study process.

Results

The study results explore that there are differences in the outcomes of surgical treatment of DDH with Salter Innominate and Pemberton osteotomy. There was a statistically significant association between age and type of Osteotomy (P-value <0.001) and there was a significant difference in Pre-operative, Post-operative and last follow up acetabular index ($p < 0.001$). Although there was not statistically significant association between clinical outcome and type of Osteotomy (P-value =0.470). In the Salter Osteotomy method excellent result was 67.3%, good result was 20 %, and fair result was 8.2% and poor results were 4.5%. But in Pemberton Osteotomy group, the excellent result was 60.9 %, good result was 24.5%, fair result was 10.1 % and poor result was 4.5%. There weren't statistically significant associations between redislocation and subluxation with the type of osteotomy as evident by (p -value =0.622, p -value = 1.00) accordingly. Acetabular incongruity was another complication that was evaluated in both Osteotomy methods. There were 4 participants (3.6 %) who had incongruent acetabulum and underwent Pemberton osteotomy hence there was an association between type of osteotomy and acetabular incongruity as evident by (P-value =0.044).

Conclusion

The present study shows that both Salter and Pemberton pelvic osteotomy have satisfactory result with different prerequisites and outcomes, still both osteotomies can be used as best choices for children aged 2-6 years old.

Surgical Ligation of PDA using Left Upper Thoracotomy approach at a tertiary care hospital in Kabul, Afghanistan

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Introduction

Patent Ductus Arteriosus (PDA) is a congenital disorder in the heart wherein a neonate's ductus arteriosus fails to close after birth. PDA accounts for approximately 10% of CHD cases and occurs

more frequently in women. Early symptoms are uncommon, but in the first year of life include increased work of breathing and poor weight gain. Later symptoms may include; fatigue, dyspnea and palpitation. The purpose of this study is to acknowledge the current practice for the ligation of PDA at a tertiary care hospital in Kabul, which will assist to improve patient outcome.

Methods

Retrospective data analysis of 319 patients who have undergone surgical ligation of PDA during 2016 and 2017 is performed using simple descriptive statistics. The data was collected through a tool after ensuring content validity. Exemption was sought from the Ethical Review Committee of the institution; and measures are taken to ensure confidentiality of the data.

Results

Almost 71% of the patients were female with the majority (88%) falling in the age category more than one year, and 12% were less than one-year-old at the time of surgery. It was found that, the parents of 57% of the patients had consanguineous marriage; and patients were mainly from Kabul, Nengarhar and Ghazni. Pre-operatively, patients reported symptoms of repeated chest infection (88%); fever (11%); palpitation (7%) and fatigability (21%). The assessment also revealed presence of murmur (95%); thrill (1.3%); bounding pulse (11%) and exertional dyspnoea (2%). Non-cardiac anomalies were found with 7 cases and 26 patients had chromosomal disorder. 37% of the patients reported poor weight gain; while a BMI below 18.5 was found in more than 84% of the patients.

The diameter of PDA ranged from 1.4mm to 18.0mm; and with 174 documented data 61 patients had Ejection Friction 34%-64%; 95 patients had Ejection Friction 65-75% and 18 patients with Ejection Friction 76-85%. Additional cardiac anomalies were also found with 19 patients and PAH with 48 patients. All patients underwent surgical ligation for PDA with 100% survival rate. Pneumothorax (8 patients); pericardial effusion (1 patient); wound infection (2 patients); and sepsis (1 patient) were the post-operative managed complications. Average length of hospital stay was 4.5 days including pre-operative hospital stay.

Conclusion

The demographic characteristics and symptoms presented by the patients resemble what is reported by the literature. Surgical ligation of PDA is proved a safe method for our patients. Transcutaneous device closure which is widely used method of PDA ligation has to be tested in our context; and the outcome to be compared with the surgical method for efficacy.

Thoracoscopic Repair of Congenital Diaphragmatic Hernia of a child for the first time in Afghanistan: A case report

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Introduction

Congenital diaphragmatic hernia (CDH) is birth defect in diaphragm. The diaphragm is a tendon muscular sheet which separates chest cavity from the abdominal cavity. In CDH, either in left or right side, there is a defect through which abdominal viscus primarily intestine herniate to the chest compromising ventilation and lung development. The management and treatment of CDH remains a challenge. The incidence has been reported high as 1 in 2000 births. Approximately 80% CDH are in left side and bilateral defects are rare. The morbidity and mortality associated with CDH is due to pulmonary hypoplasia and pulmonary vascular hypertension. The typical clinical presentation of CDH is respiratory distress. Open surgery is classic operative approach which now in modern centers converted to thoracoscopic or laparoscopic approach. Survival rates for CDH vary between institutions and range from 25- 83 %. These benefits were proposed by a paper in Portugal (1). Crisis also reported 51 patients subjected to thoracoscopic approach with shorter hospital stay, lesser need for mechanical ventilation and resumption of early feeding (2). Tyson AF. compared Thoracoscopic with open surgery, found out that Thoracoscopic procedure has similar outcomes compared to open approach but it has better cosmetic results (3).

Case Report

An 18-month old boy, born at term presented with prolonged cough and difficulty breathing, who is not improving with conventional therapy and antibiotics. On examination, the patient was found to have mild respiratory distress and decreased air entry to the left lung on auscultation. Review of system was unremarkable. Blood tests were within reference range and chest X-ray showed multiple gas filled bowel loops in the left hemi thorax. CT chest confirmed the diagnosis of left sided CHD. The parents were offered both open and thoracoscopic approaches. They chose the thoracoscopic approach. Following general anesthesia with the patient on right lateral position with the left chest up, 3 ports are made, one for telescope and two for the instruments. The stomach, small and large bowels and spleen were seen in the left hemi thorax. After insufflation of air to the chest, the viscera reduced readily to the abdominal cavity. The defect closed with 2/0 proline suture and chest tube placed. The chest tube removed on post-operative day 3, and the patient discharge home on stable condition. He was followed up on post-operative day 7 in outpatient clinic with satisfactory condition and the suture removed.

Although, the goal of both open and thoracoscopic procedures is to reduce abdominal viscera and to close the diaphragmatic defect. However, the thoracoscopic approach has superiority over open approach owing to several factors such as less pain, early recovery and minimal scar. Furthermore, in the case of CDH, the thoracoscopic repair eliminates the risk of post-operative ileus and adhesions.

Conclusion

Thoracoscopic approach for Diaphragmatic hernia is a safe, cosmetic and easier procedure with less post-operative complications.

Comparison of efficiency, and outcome of corticosteroids therapy alone and immunoglobulin G (IVIG) and corticosteroids combined in patients with Guillain-Barre syndrome (GBS)

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Introduction

GBS is an acute, severe polyradiculoneuropathy that is autoimmune in nature, typically occurs as a rapidly evolving areflexic motor paralysis with or without sensory disturbance.¹ Life threatening respiratory paralysis may rapidly appear as the disease progresses. The purpose of the was description and identifying the clinical effects of corticosteroids in patients diagnosed with GBS

Methods

This was an observational case series study of patients who received corticosteroids for GBS in Pirzad hospital between the years 2014-2017. In total, there were 3,100 patients hospitalized of which 82 patients were clinically diagnosed with GBS at the time of hospitalization. The patients are subcategorized into 6 groups according to; Age, Sex, Deficit at the time of hospitalization, Corticosteroids used in their treatment, Corticosteroids with IVIG combined and their recovery. Almost every patient had an episode of fever prior to developing neurological deficits.

Result

About 50% (42 patient) of patients were given corticosteroids only, and 46% (36 patient) of them were given IVIG and corticosteroids combined. 38% of patients that were treated, recovered well with only few minor or no deficit at all at the time of discharge and of this 38%, 62% had only been given corticosteroid and 34% were given corticosteroid and IVIG combined. With only 3% mortality rate in both groups.

Conclusion

Although usage of corticosteroids is controversial in treatment of GBS in literatures but our study showed that corticosteroids alone were superior to corticosteroids combined with IVIG in terms of outcome. Some patients failed to recover completely even after treated with corticosteroids-IVIG treatment. The remedy for cases as such can be plasmapheresis; a treatment method for GBS which unfortunately is not available in Afghanistan as of now.

Intrahepatobiliary Cystadenoma Mimicking Hydatid Cyst of Liver: A Clinicopathologic Study of 6 Cases

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Introduction

Intrahepatic biliary cystadenomas are rare hepatic neoplasms, which are usually cystic. These tumors are often misdiagnosed as simple liver cysts and hydatid cysts clinically and radiologically owing to nonspecific clinical and radiologic features. These tumors require complete resection, as recurrence and malignant transformation can occur following incomplete excision. It is essential that these tumors be diagnosed accurately so that they can be adequately excised.

Methods

Clinical and radiological features of 6 cases of biliary cystadenoma are described.

Results

All of these cases were resected with the clinical and/or radiological impression of Simple liver cysts and/or hydatid cysts. Out of the 6 patients, 5 were females and 1 was male. Ages of the patients ranged from 28 to 60 years (mean 45 years). Patients presented with non-specific symptoms. Internal septations were seen on preoperative imaging (when available). Grossly, all tumors were cystic, sizes varied from 5.5 to 14 cm, mean size was 9.0 cm. Histopathologically, cystic spaces were lined by cuboidal to columnar mucin secreting epithelium with underlying ovarian type stroma. In 1 case, ovarian type stroma was not seen. Recurrence was seen in 3 cases at 1 to 5 years of follow up.

Conclusion

Owing to their malignant potential and high recurrence rate following incomplete resection, an aggressive surgical approach is recommended. Prognosis is excellent after complete resection.

Developmental dysplasia of the hip, a significant cause of morbidity among children in Afghanistan

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Introduction

Developmental dysplasia of the hip (DDH) is one of the most common congenital malformations which generally includes: Subluxation, complete dislocation of the femoral head from true acetabulum and Acetabular dysplasia. The aim of this study is to evaluate the proportion of DDH among children at FMIC, Kabul Afghanistan.

Methods

A retrospective review of 2758 patients with Developmental dysplasia of the hip who were treated at FMIC from 2008 to 2018. Structured checklist was designed for data collection and consecutive sampling technique was employed and only participants who aged between 10 days to 13 years were included in this study. The data analysis was done using SPSS version 22.

Results

Records of these patients revealed that 286 (10.5%) patient treated conservatively and 2472 (89.5%) patients treated surgically. Out of 2758 patients; 1968 (71%) were female and 790 (29%) were male. 1020 (37%) were left sided, 1276 (46%) were both sided and 462 (17%) were right sided. Most of our patients were from Kabul, Badakhshan, Faryab, Kapisa, Parwan and Herat provinces and a small percentage of patients were from Nimroz, Kunar and Laghman provinces. A higher percentage of operated patients were aged between 3 to 5 years with the most being undergone Open reduction of the hip and Salter Osteotomy of the pelvis. Number of patients had an increasing pattern each year.

Conclusion

Developmental dysplasia of the hip has a wide distribution all around Afghanistan and is not centred to only one specific region. Higher percentage of our patients required surgery because of

delay in seeking treatment due to lacking neonatal screening program for DDH. Hence ministry of Public Health (MoPH) should develop guidelines and training programs for gynaecologists, midwives and paediatricians about referral of suspected case of DDH with risk factors to paediatric orthopaedists for proper and early management of these cases.

Quality, Nursing and Allied Health

Effect of capacity building intervention on patient's safety improvement in Kabul Hospitals

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Introduction

MOPH has recognized the importance of patient safety in health care. MoPH in collaboration with WHO launched the patient safety friendly hospital initiative in selected national and private hospitals.

The initiative was implementation of a set of WHO patient safety 20 critical standards in hospitals. Implementation of Critical standards are compulsory to become enrolled in the patient safety friendly hospital initiative. The aim was to collect evidence on role of capacity building in improving patient safety standards implementation.

Methods

Seven hospitals were selected on the basis of predefined criteria for the study. WHO patient safety Critical standards and assessment tool was used to assess the hospitals to see patient safety standards are being implemented in these hospitals or otherwise. Scoring was done on the basis of extent of meeting these standards. The data collection methods were including; staff interview, observation of processes and review of hospital record. Two rounds of assessment, the first as base line and the second after capacity building interventions.

The enrolled hospitals were re assessed after training with same tool and methodology to see the level of implantation of patient's safety critical standards in years 2016-17.

Results

In base line assessment it was found that Most of the hospitals were not implementing even fifty percent (50%) of the patient's safety critical standards. Staff of All of these hospitals had very little knowledge of patient safety and patient's safety was not a priority. There was no focal point to take care of the patient safety issues in selected hospitals. Policies, Guidelines and SOPs were mostly not available for safe patients care and patients were at greater risk of patient safety incidents, medical errors and therapeutic mishaps. In the second round of assessment Substantial improvement in patients safety critical standards implementation was observed. Most of the hospitals succeeded to score more then 60 % except one hospital where the turnover of the staff and poor follow up by hospital manager were the the most possible reasons behind poor compliance. Private sector hospitals performance was better as compared public sector hospitals and the possible reason may be their autonomous nature and control over the resources.

Conclusion

The assessment indicates that structured capacity building intervention has positive impact on the patient safety standards implementation, Assessment also indicates that autonomous hospital perform better in patient's safety standards implementation.

Challenges on-the-way of nursing administration at public hospitals in Kabul, Afghanistan

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Introduction

The purpose of this study was to determine the challenges faced by the nursing administration at public hospitals in Kabul, Afghanistan.

Methods: A cross-sectional study design was used to recruit 86 nursing managers and head nurses from 17 public hospitals in Kabul. The participants rated the frequency of 13 challenges that hinder their performance.

Results

There were 14 nursing managers and 72 head nurses in the study. Almost 80% of the participants were male with the majority falling in the 35–44-year age bracket. Both nursing managers and head nurses were equally affected by all 13 challenges, except the lack of recognition where head nurses were affected more than the nursing managers ($p = .003$). The most frequent challenges for both were staff absenteeism and then too many responsibilities.

Conclusion

There are multiple challenges that hinder the performance of nursing administration that need to be addressed through appropriate national policy and strategies. The findings of this study can inform policy makers and draw their attention to overcome the challenges faced by nursing management. This will ultimately improve satisfaction leading to improved patient and organisational outcome. The national policy and strategy should address areas that could enable nurses to maintain a balance between household and professional responsibilities; and also encourage the enrolment of female nurses in the profession.

Assessment of paediatric emergency care in Afghanistan; Gaps and solutions

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Introduction

The U-5 children deaths at hospitals in Afghanistan is persistently high due to poor emergency care, HMIS data showed that U-5 children make 30% of hospital admissions, but they account for more than 50% of the hospital deaths. The objective of this study was to identify gaps in pediatric emergency care, and propose evidence based solutions.

Methods

This was a cross-sectional study using a mix of quantitative and qualitative methods to assess hospital readiness and quality of pediatric emergency service provision at 7 public hospitals (5

provincial and 2 district) in 5 provinces of Afghanistan which represent both urban and rural, secure and insecure areas (KBL-Ataturk, Bamyān PH, BDK-PH, Baharak DH, Paktia PH, Takhar-PH, Dashteqala DH). These hospitals were selected purposively to provide a snapshot of the main gaps, and visited by trained medical doctors of child health department using standard questionnaire and three methods of structured interview and knowledge test, clinical observation, and hospital inventory and record review in Jul 2017-Mar 2018.

Results

All hospitals had separate emergency departments with some essential equipment and medicines, but no systematic triage to reduce waiting time, none of them had at least one designated bed for children equipped with pediatric size AMBU-bag, monitor probe, and cuff (except Bamyān). No functional emergency command system (except Bamyān), and no job aids/wall charts for management of airway, breathing, and circulation observed. Knowledge of health providers on assessing emergency and priority signs in children, and their skills on resuscitation of newborn and children were not satisfactory (4 providers per hospital interviewed and observed). Availability of essential emergency medicines were inadequate. Inappropriate use of antibiotics (in 14 out of 28 observed cases), and poor waste segregation observed.

Conclusion

The gaps in availability, and quality of pediatric emergency care identified. The evidence based solution is PHI (Pediatric Hospital Improvement Initiative)/ETAT (Emergency Triage Assessment and Treatment) implementation which is recommended by WHO, and endorsed by Ministry of Health in July, 2008.

Surgery safety checklist impact on post-operative morbidity and mortality

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Introduction

Surgery may be associated with different complications which are preventable in most cases. Implementation of surgery safety checklist can promote per-operative communications and is crucial to reduce the number of mortality and morbidity during and after surgery. The objective of the study was to assess the impact of surgery safety checklist on surgery outcome and decrease of morbidity and mortality.

Methods

This study is an interventional analytic research carried out in surgery ward of Aliabad University Hospital on 250 patients in two groups. The first group consist of 100 patient selected retrospectively in whom the surgery safety checklist is not implemented, the second group include 150 cases selected prospectively without implementation of surgery safety checklist. The outcomes of two groups are noted and evaluated for impact of surgery safety checklist on decreasing post-operative mortality and morbidities. Data is analyzed in SPSS.

Results

Considering different complications, the number of operative bleeding is decreased from 2% to 0.8% (P value=0.85), wound infection is decreased from 20.4% to 4.4% (P value <0.001). Systemic infections, sepsis and septic shock are 7.6 % in patients without checklist and 0.8% in patients with

implementation of surgery safety checklist (P value<0.001), cases of pneumonia are decreased from 1.2 % to 0.4% in patients with checklist implementation. The number of reoperation and other complications (hematoma, burst, nerve damage etc.) and mortality was zero after implementation of checklist.

Conclusion

The impact of surgery safety checklist implementation to decrease the mortality and morbidity in surgical patients is has been proved in this study but still require more research with bigger sample size in some cases such as bleeding and post- operative pneumonia.

Effect of mentorship program on improved quality of health services in remote health facilities of Afghanistan

Zahra Mirzaei

Afghan Midwives Association (AMA) *Innovation*

Introduction

AMA with technical and financial support of Swedish Committee for Afghanistan (SCA) has implemented mentorship program from 2011 onward. This program seeks to strength midwifery practice and improves quality of care and work environment by providing continued education and technical on-job support to less experienced midwives by trained experienced midwives. This program of AMA has successfully supported more than 108 experienced midwives to mentor nearly 330 newly graduated midwives, and has strengthened the professional capacity of midwives in nine provinces of Afghanistan. The study aim was to increase acceptance of midwives in the community and quality of midwifery services through providing supportive environment and update knowledge.

Methods

The program was implemented in 30 health facilities in Samangan, Laghman and Maidan Wardak provinces of Afghanistan on 2017. A secondary analysis of mentorship reports performed in order to identify the impact of mentorship program on the competency and capacity of (30) newly graduate midwives mentored by six experienced midwives, who then were deployed at (30) periphery health facilities in (3) provinces of Afghanistan.

Results

Through the secondary analysis it was found that, participating facilities improved performance in Ante Natal Care (ANC) and Post Natal Care (PNC) which increased from 42% to 95% and from 40% to 92% respectively. Labor/delivery performance improved from 45% to 95%, and management of complicated labor/delivery performance improved from 35% to 91%.

MCH indicators in supported HFs under mentorship program increased from 10,435 to 13,092 over the same period of years. Similarly, midwives' skills and knowledge assessed, which got improved from average scores of 25% to more than 93%.

Conclusion

The findings of this secondary analysis show that mentorship program has increased acknowledgment of midwifery profession among all healthcare providers and acceptance among community members. The program will empower mentees to practice competently and confidently according to the national agreed scope of practice and assist them to be 'fit for purpose' and capable of providing high quality, safe and respectful maternal and newborn health

services. The program is ongoing with plans for national expansion to ensure that quality of work and efficiency of services are in place.

Accuracy of Malaria Rapid Diagnostic Test (RDT) using for managing of probable malaria by microscopy verification in malaria endemic setting, Afghanistan 2017

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Introduction

Malaria is a major public health burden in the endemic setting of Afghanistan. malaria case management is integrated at basic and hospital services of health care system. Rapid Diagnostic Test (RDT) introduced at community level as an important tool to help Community Based Management of Malaria (CBMM) implementation at community and lower health facility levels, where microscopy is not available. One of the questions which raised during implementation of CBMM, that need to be answered: Dose the performance characteristics (Sensitivity, Specificity and predictive values) of RDT at community level is lower than company evaluation result? the characteristics performance of RDT kits have important information and will help to guide implementation of RDT in the field by national malaria control programmes. The objectives were including: 1) to assess rates of diagnosis of RDT using among malaria probable cases 2) to assess rates of diagnosis of malaria by microscopic examination and 3) to assess accurate diagnostic rate of RDT through microscopic verification as gold standard for malaria diagnosis.

Methods

This study assessed the diagnostic performance of CareStart™ Malaria Ag. pLDH/ HRP2 Combo RDT. The performance of this malaria kit was verified by microscopy as a gold standard for the detection of malaria parasites. Four-hundred participants were included in the study from five study health facilities in Nangarhar province.

Results: Out of the 400 patients recruited, (41% n=165) were True positive while (46% n=182) were True Negative, verified by microscopy. The sensitivity of RDT to detect malaria parasites was 89%, the specificity was 85%, the positive predictive value was 84% and the negative predictive value was 90% in 95% of Confidence level.

Conclusion

Rapid diagnostic tests can be applied in high and low endemic setting of country along with quality assurance and proper storage and transportation of the test kits. Proper usage of RDT can significantly improve the quality of malaria case management in areas where expert microscopy or PCR methods are not available.

Prevention of Surgical Site Infections (Under Category of Quality and Patient Safety)

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Introduction

Aim of the study were to I. identify necessary components for preventing surgical site infections. And II. Identify daily safety procedures undertaken to prevent surgical site infections.

Methods

Used direct observation Minor theatres and outpatient consultation rooms at Amana Regional Referral Hospital and Mnazi mmoja Hospitals and Buguruni Health Centre were used as a study sample.

Results

This study Upon observation in the selected sample areas the following results were deducted. Hands related safety tools observed included, but not limited to; Hand washing stations with clean water, Soap and hands sanitizer. These tools are available in both observed areas although at limited amount, I asked on the extent to which these tools are available at the hospital they replied that it depends on the number of patients. Explaining one scenario that these tools become scarce in case of emergency increase in numbers of patients such as when there is an accident. Personal protective equipments such as, but not limited; Apron, Mask, Boots, Gurgles and gloves. At Amana Hospital these equipment were available in time of observation, in order to understand their extent of supply I asked some staffs to comment on the issue, they said that sometimes medical staffs they don't wear all equipment. At Mnazi Mmoja Hospital and Buguruni health Centre these equipment are limited. General sterilization tools and other equipments such as decontamination buckets, JIK solution, waste disposal containers, sharp boxes, and separation of zone (clean and sterile zone). Unavailability of zone separation between sterile and clean area in all health facilities observed in this study. At Amana hospital sharp containers are filled above the $\frac{3}{4}$. At Mnazi mmoja hospital and Buguruni health Centre there is no waste segregation.

Conclusion

In general safety procedures for preventing surgical site infection in 3 sampled heath facilities was good, although there were some observed challenges such as poor waste disposal and segregation, and limited safety tools, especially when there are emergencies like accidents.

Ethical Issues Confronted by Medical Students in Medical Education and Training

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Introduction

Medical students encounter numerous ethical issues during training at hospitals. Their ethical dilemmas are often of different kind than those confronted by senior healthcare professionals. Though the teaching and training of ethics is a necessary component of curricula of medicine, yet these curricula usually do not cover the specific ethical dilemmas of the students. The objective of the study was to determine the ethical issues faced by the medical students during their clinical training and education.

Methods

Cross-sectional study design was conducted in Dow University of Health Sciences, Karachi in April, 2016. Total of 200 final year medical students participated in this study.

Results

Out of 200 respondents, 80% (n, 160) had confronted a situation of facing a range of ethical issues during their clinical training and education. They had to face the situation very frequently (60%), frequently (30%) and occasionally (10%). Five percent (n, 10) had no idea of basic principles of bioethics. The study participants had rotation at emergency, out-patient and in-patient ward of all medical and surgical sub-specialties. There was a range of ethical issues/dilemmas reported by study participants. These included telling the truth/disclosure, respecting patients' wishes/autonomy, patients' involvement in training, student's competence, unethical behavior of healthcare providers, teaching with several students encircling a patient, students' unethical intervention/actions due to pressure of a poor evaluation, feeling of powerlessness, conflicts of interest, resource allocation, doctor-patient relationship, informed consent, and standard of care. These issues were never resolved or even discussed with clinical teachers. The study respondents felt guilty for being unable to resolve these issues, and were of the opinion that the teachers were not skilled enough to teach and train the students to resolve ethical issues. Ninety-five percent felt embarrassed in witnessing clinical teachers acting unethically.

Conclusion

Unethical behaviour of clinical teachers has a negative impact on students' moral values. There is a critical need to recognize the ethical issues faced by medical students. This may help develop the ethics curriculum to equip medical students to resolve ethical issues.

Non-Communicable Diseases

Multi-detector computed tomography evaluation of kidneys and renal vascular anatomy in living probable renal donors, Cross sectional descriptive study

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Introduction

Living donor renal transplantation has become major treatment for patients with end-stage renal disease. Preoperative evaluation of potential renal donors is crucial for selecting proper donors and the surgical technique. Multi- detector computed tomographic angiography is a noninvasive technique for preoperative evaluation of potential renal donors. As the practice of renal transplant has recently been started in Afghanistan, therefore authors aimed to look for the variation of renal vasculature, collecting system and other congenital and acquired anomalies. The study aims to evaluate the normal anatomy, congenital variants and acquired abnormalities of kidneys and renal vasculature in probable renal donor

Methods

Cross sectional descriptive study has been conducted on probable renal donors who underwent abdominal MDCT at radiology department of FMIC from May 2017 to May 2018. MDCT images were reviewed for congenital and acquired renal vascular abnormalities.

Results

A total of 136 patients (272 kidneys) were included in the study, 107 (78.7%) being male and 29 (21.3%) females. About 81 participants (109 kidneys) had renal vascular variation 53 (65.4%) being unilateral and 28 (34.6%) being bilateral. About 37 (45.7%) participants had isolated arterial variations, 23 (28.4%) isolated venous variations and 21 (25.9%) had both arterial and venous variations Right renal vascular variations were detected in 61 cases and left side in 48 cases. A number of 55 (50.5%) kidneys isolated arterial anomalies, 37 (33.9%) isolated venous variations and 17 (15.6%) had both arterial and venous variations.

The 272 kidneys were supplied by 322 renal arteries (228 single, 38 double and 6 triple). A total of 72 kidneys had arterial variations. A total of 54 kidneys had venous variations

Conclusion

Significant variations are seen in renal vasculature which can be well evaluated by MDCT as a non-invasive imaging approach in probable renal donors.

Age Distribution and Types of Breast Lesions among Patients Diagnosed by Fine Needle Aspiration Cytology (FNAC) at a Tertiary Care Center in Kabul Afghanistan: A Retrospective Chart Review Study

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Introduction

Breast disease can be widely ranged from different inflammatory conditions, cystic changes, benign breast lumps, like fibroadenomas up to different types of cancers. Breast cancer is the most common malignant neoplasm among female population in the world. The most common type is Invasive Ductal Carcinoma. This study aimed to determine age distribution and types of breast diseases among patients diagnosed by FNA cytology at a Tertiary Care Center in Kabul Afghanistan.

Methods

A retrospective chart review was done between February 2015 to May 2018 for all patients with breast diseases that undergone FNAC procedure. All the smeared slides were fixed with spray fixative, stained by Hematoxylin & Eosin and Pap stain in the Pathology Department of French Medical Institute for Mother and Children.

Results

Records revealed that 450 cases of breast lesions were diagnosed by FNA cytology during that period. The mean age of patients was 35.38 ± 13.11 years (15 to 75 years). Majority of the cases 108 (24%) were malignant cancers. The second most common diagnosed lesion was fibroadenoma, 93 (20.7%) and third common lesion was fibrocystic changes, 82 (18.2%). The inflammatory conditions composed 50 (11.1%) cases, benign lesion that labeled as negative for malignancy was 36 (8%), tuberculosis composed of 28 (6.2%), suspicious for malignancy 22 (4.9%), lipoma 13 (2.9%) and other lesions 18 cases (4%). The lowest age for carcinoma was 20 years, and 67 (62%) were in the left side, 40 (37%) were right sided and one case (0.9%) was bilateral. One case (0.92%) of carcinoma was also reported in male breast.

Conclusion

Our data result showed that the highest number of cases were malignant cancers among all diagnosed lesions. This highest number of malignant cases probably because of patients unwilling to visit their physicians or physicians do not refer them to FNA until they do not suspect for malignancy. However, it is possible that the said higher cases are a real distribution for malignancy. The data shows that carcinoma is even reported in younger ages. This is suggesting that physician should not ignore any breast lump in younger patients even in male patients and the possibility of carcinoma must be in consideration. General awareness through media and self-education for women and even for men are necessary for prevention or early diagnosis for quick interventions, thus decrease burden of breast diseases, relieve anxiety of non-neoplastic conditions, and reduce the associated mortality in cases of malignancy.

Frequency and Pattern of Haematological Disorders Diagnosed by Bone Marrow Aspiration and Trepine Biopsy at A Tertiary Care Facility In Kabul Afghanistan

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Introduction

Bone marrow aspiration and trephine biopsy are among the most reliable diagnostic procedures for diagnosing malignant and non-malignant haematological disorders. The study was aimed to

find out the frequency and pattern of malignant and non-malignant haematological disorders on the basis of bone marrow aspiration and biopsy.

Methods

A retrospective descriptive cross-sectional study design was conducted at Clinical Pathology Department of French Medical Institute for Mothers and Children from Jan 2013 to Dec 2016. A total of 100 patients of both genders, who were either referred to the facility or were hospitalized and who had clinical history of anaemia, fever and any organomegaly, were included in this study. Their ages ranged between 1 to 71 years. All the patients underwent for bone marrow aspiration and trephine biopsy procedures in addition to complete blood count (CBC), peripheral blood smear morphology and reticulocyte count. In addition, other tests including iron profile, serum B-12 and serum folate levels were also performed on those patients suspected to have related deficiencies. Bone marrow aspirations and trephine biopsies were performed and the samples were taken from posterior iliac crest under strict aseptic measures. The bone marrow aspiration was taken by Salah marrow puncture needle and smear was prepared and stained with Leishman's stain. The trephine biopsy was taken by Jamshidi biopsy needle. The marrow aspiration and trephine biopsy findings were correlated with clinical history, CBC and peripheral smear examination and data was analysed on SPSS version 21.

Results

Out of all 100 cases, 55% were males and 45% were females. Of all patients, 49% were diagnosed having some malignant disorders, 40% were suffering from a non-malignant condition, whereas 11% were having normal bone marrow/trephine biopsy findings. Among malignant disorders, majority i.e., 18 (36.7%) were *acute myeloid leukaemia* (AML) followed by *acute lymphoid leukaemia* (ALL), 12 (24.5%), Myelodysplastic syndromes (MDS), 10 (20.4%) *chronic myeloid leukaemia* (CML), 6 (12.2%) *Polycythaemia vera* 2 (4%). There was only one case of multiple myeloma. Of those patients who had a malignant disorder, 25 (51%) were children and 24 (49%) were adults. Among non-haematological disorders, the frequency of megaloblastic anaemia (caused by vitamin B12 and folate deficiency) was 16 (40%), *iron deficiency anaemia* (IDA) was 13 (32.5%), *thrombocytopenia* was 6 (15%), *haemoglobinopathies* were 3 (7.5%) and *visceral leishmaniasis* 2 (5%). Among non-haematological disorders, most of the patients i.e., 25 (62.5%) were adults and 15 (37.5%) were children.

Conclusion

Haematological malignant disorders, particularly acute myeloid leukaemia, are quite common in Afghan population. Among haematological non-malignant disorders, megaloblastic anaemia is also a frequently diagnosed disorder on bone marrow aspiration examination. Iron deficiency anaemia, although more prevalent but can easily be diagnosed on peripheral blood examination.

Utility of Claudin-18 in distinction between various subtypes of ovarian adenocarcinoma, and metastatic colorectal adenocarcinoma involving the ovary

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Introduction

Ovarian adenocarcinoma is generally classified into five major subtypes: Mucinous adenocarcinoma (MCa), Endometrioid adenocarcinoma (EMCa), Clear cell adenocarcinoma (CCCa), High grade serous adenocarcinoma (HGSCa) and low grade serous adenocarcinoma (LGSCa). Among them, mucinous adenocarcinoma poses the greatest difficulty in terms of differentiation between mucinous versus non-mucinous, and primary versus metastatic disease. Distinguishing these lesions is often challenging, not only at the time of intraoperative assessment, but also at the time of final pathological diagnosis.

The study aims were to investigate the utility of claudin-18 (CLDN18, a tight-junction protein specifically expressed in gastric epithelium) in distinction between ovarian mucinous adenocarcinoma and various subtypes of non-mucinous ovarian adenocarcinomas, and

To investigate the utility of CLDN18, and other conventional markers (CK7, CK20, CDX2, MUC2, MUC5AC, and ER) in distinction between primary mucinous adenocarcinoma and metastatic colorectal carcinoma involving the ovaries.

Methods

237 cases of ovarian adenocarcinoma, including MCa (n = 19), EMCa (n=38), CCCa (95), HGSCa (n=58), LGSCa (n=11), and metastatic CRC in the ovary (n = 16), were retrieved from the archives of the Department of Pathology of the University of Tokyo Hospital. All the tumors were fixed in formalin and embedded in paraffin. For immunohistochemistry, we arranged all primary ovarian adenocarcinomas (n=221) in tissue microarray with duplicate 2mm tissue core from each lesion. Metastatic CRCs were stained on a representative whole-tissue section. Immunohistochemistry was performed for CLDN18, MUC2, MUC5AC, CK7, CK20, CDX2, and ER. Immunohistochemical staining was performed according to standard techniques on a Ventana Benchmark XT autostainer (Ventana Medical Systems Inc., Tucson, AZ).

Results

CLDN18 expressed exclusively in primary ovarian MCa, while all other subtypes of non-mucinous adenocarcinomas were CLDN18 negative. Metastatic CRCs in the ovary, were also negative for CLDN18. Expression of CDX2, MUC2, and CK20 was more frequently detected in metastatic CRC than in primary MCa. Both primary MCa and metastatic CRC were almost all negative for ER

Conclusions

Our findings suggest that, immunohistochemistry for CLDN18 is diagnostic for mucinous adenocarcinoma. It can be used for distinction between MCa and non-mucinous subtypes of ovarian adenocarcinoma. In addition, immunohistochemistry for CLDN18, MUC5AC, CK7, and CDX2 is a useful adjunctive diagnostic tool for differentiation of primary ovarian MCa and metastatic CRCs involving the ovaries. Furthermore, expression of gastric markers (CLDN18 and MUC5AC) along with intestinal markers (CK20 and CDX2) suggest a gastrointestinal phenotype of primary ovarian MCa.

Expression of Adiponectin Receptor 1 Is Indicative of Favorable Prognosis in Non-small Cell Lung Carcinoma

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Introduction

Lung cancer is a major cause of cancer-related death worldwide. It is believed that obesity-related malignancies such as breast, endometrial, colorectal, and kidney carcinomas have lower plasma level and/or tissue expression of adiponectin receptors. However, the association between adiponectin receptors and lung cancer, a non-obesity-related malignancy, is still unknown.

Methods

We evaluated the tissue expression of adiponectin receptor (AdipoR) 1 and AdipoR2 in 83 cases of non-small cell lung carcinoma (NSCLC) and matched non-neoplastic lung tissues by immunohistochemistry and real-time polymerase chain reaction (PCR). Clinicopathological data, including smoking history, smoker's bronchiolitis, emphysema, lymph node metastasis, and T-stage were collected and evaluated.

Results

Expression of immunohistochemically stained AdipoR1 and AdipoR2 was observed in all samples of non-neoplastic lung tissues. Both receptors showed higher mRNA expression in non-neoplastic than neoplastic tissues ($p < 0.05$). In NSCLC tissues, AdipoR1 immunohistochemical expression was not observed in most of patients with squamous cell carcinoma and current smoking history (31/42, $p = 0.04$ and 25/29, $p = 0.003$, respectively). Additionally, AdipoR1 mRNA expression was significantly lower in patients with lymph node metastasis ($p = 0.05$). Meanwhile, AdipoR2 immunohistochemical stain expression was inversely correlated with T-stage ($p = 0.05$) and AdipoR2 mRNA expression was significantly lower in patients with smoker's bronchiolitis ($p = 0.01$) and emphysema ($p = 0.03$).

Conclusion

Patients with expression of AdipoR1 had longer overall survival. AdipoR2 expression was not correlated with patients' survival. In conclusion, we suggest that expression of AdipoR1 is indicative of favorable prognosis and may be used as prognostic marker in NSCLC.

Distribution of types of leukemia and its socio-demographic characteristics among cases diagnosed at clinical laboratory of French Medical Institute for Mothers and Children (FMIC) Kabul, Afghanistan

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Introduction

Leukemia is a kind of blood cancer that is characterized by infiltration of White Blood Cells in peripheral blood. Malignancies in children are second most frequent cause of death after accidents in pediatric age, while leukemias represents 30% of all malignancies of children age. This study aimed to determine the distribution of types of Leukemia and its socio-demographic characteristics diagnosed either in the peripheral blood smears or bone marrow in clinical laboratory of FMIC, Kabul, Afghanistan.

Methods

A descriptive case series study design was employed to achieve the study objectives. The study population was comprised of all those patients who were referred to hematology section, clinical laboratory of FMIC for the Complete Blood Count (CBC) examination which revealed White Blood Cell count of more than 20000. Records of all the diagnosed cases of Leukemia from the period of 2010 to 2017 were reviewed and included in this study.

Results

Records revealed that 328 diagnosed cases of Leukemia were identified from the period of 2010 to the end of 2017. Majority of the cases were males, 188 (57.3%); whereas 140 (42.7) were females. The mean age of cases was 28.8 years and age ranged between 1 to 81 years. Regarding the types of Leukemia, 93 (28.3%) had Chronic Myeloid Leukemia (CML), 88 (26.9%) had Acute Lymphoblastic Leukemia (ALL), 71 (21.6%) had Acute Myeloid Leukemia (AML) and 76 (23.2%) of the cases were diagnosed as other types like Chronic Lymphoblastic (CLL) and Erythorblastic Leukemia.

Conclusion

The number of cases of Leukemia are growing in Afghanistan. The most common types of Leukemia were: Chronic Myeloid Leukemia (CML) and Acute Lymphoblastic Leukemia (ALL), male sex was dominant in patients with diagnosis of Leukemia and majority of the patients were younger. The increasing burden of cases is alarming and we should devise strategies for the accurate diagnosis and treatment of Leukemia in Afghanistan.

Diagnostic Accuracy of "P120" in Differentiating Invasive Lobular from Invasive Ductal Carcinomas of Breast

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Introduction

Breast Cancer is the most commonly diagnosed cancer among women, with approximately 182,000 women diagnosed with breast cancer annually in the United States, accounting for approximately 26% of all incident cancers among women. Each year, 40,000 women die of breast cancer, making it the second-leading cause of cancer deaths among American women after lung cancer. The lifetime risk of dying of breast cancer is approximately 3.4%. The objective of the study was to determine the diagnostic accuracy of p120 in differentiating invasive lobular carcinoma from invasive ductal carcinomas of breast by taking histopathology as gold standard.

Methods

A total of 200 cases of ILC and IDC found suitable by inclusion criteria were included in this study. Each case was given a case number and a medical record number. Demographic details such as name, sex and age was collected. The received specimens was fixed in 10% buffered formalin, grossed and stained with Hematoxylin and Eosin to see the morphology. The morphology was reviewed by a histopathologist to establish the diagnosis. IHC staining for p120 was performed according to the specifications given by the manufacturer including appropriate positive and negative controls for staining. IHC staining was assessed independently and p120 staining was recorded on the proforma in terms of p120 positive (cytoplasmic staining) and p120 negative (membranous staining).

Results

In our study, out of 200 cases, 38.5% (n=77) were between 20-40 years of age while 61.5% (n=143) had >40 years of age, mean \pm SD was calculated as 43.94 \pm 7.45 years, 86.5% (n=173) were IDCs while 13.5% (n=27) were ILCs, diagnostic accuracy of p120 in differentiating invasive lobular carcinoma from invasive ductal carcinomas of breast by taking histopathology as gold standard

was calculated as 81.48%, 88.44%, 52.38%, 96.84% and 87.5% for sensitivity, specificity, positive predictive value, negative predictive value and accuracy rate respectively.

Conclusion

We concluded that the diagnostic accuracy of p120 in differentiating invasive lobular carcinoma from invasive ductal carcinomas of breast by taking histopathology as gold standard is higher and useful breast tumor marker which may be used in our population after validation through other studies.

Technology, Research and Innovation

Perceptions & experiences of caregivers about the Routine Immunization (RI) & the role of Mobile Phone SMS & Automated Calls in Improving the RI coverage in certain districts of Pakistan: A qualitative study

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Introduction

A major reason for poor childhood vaccine coverage in developing countries is the lack of awareness among parents and caregivers regarding the need for immunization, and the importance of completing the entire series of vaccines. In these countries, the use of SMS text messages has shown to be effective in changing behavior towards disease prevention efforts. SMS-based interventions have been quite effective in different programs, such as smoking cessation, treatment adherence, health care scheduled appointment attendance, antenatal care attendance and compliance to immunization. However, some studies show controversial data and there is limited data from low middle income countries (LMIC) on the role of SMS based interventions to improve routine immunization (RI) coverage. The objectives of this study are : to explore the perceptions and attitudes of caregivers/parents regarding childhood vaccination. And to explore the perceptions related to SMS text messages and automated calls for improvement in RI coverage.

Methods

The department of Paediatrics and child health at the Aga Khan University conducts health demographic surveillance system (HDSS) at 4 urban regions in Karachi, Pakistan. The interviews were conducted in Sindhi and Urdu at Rehri Goth, Ibrahim Hyderi, Bhains Colony, Ali Akbar Shah field site in Karachi and Matiari. Qualitative interviews of the study conducted from December 2017 to May 2018(4320-Ped-ERC-16). Twenty-five in depth interviews were conducted at Karachi and twenty-five in depth interviews were conducted at Matiari with vaccinated and non-vaccinated children caregivers.

Results

The major concern emerges out that women are busy in home chores due to this reason they are unable to take out time for their child vaccination. It was also explored that after immunization child suffered from adverse effects & family gets disturbed that mostly father strictly refuse for further vaccination this indicates a knowledge gap. They all have this concept in their mind that it is useless to go for vaccination after few days or after a month.

Content of the messages was also discussed with the caregivers for Karachi site, majority prefer SMS content to be in Roman Urdu, two-way communication, and once in a week reminder message was preferred while for Matiari women prefer Roman Sindhi content for two-way communication reminding them about child RI every week. For Automated call two-way communication in Urdu & Sindhi was preferred for Karachi while for Matiari site Sindhi language two-way automated call was preferred. For both the sites women preferred educational and reminder content.

Conclusion

The results of this study will be useful to understand the respective effects of SMS text messages vs automated phone based communication to enhance RI.

Performance of cardiac Troponin I: A comparison between the Point of Care testing (POCT) AQT90 FLEX and the Siemens Advia Centaur Analyzer in an emergency setting

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Introduction

The aim of the study was to validate point of care testing (POCT) method of Trop-I analyzer and compare it with a central laboratory based Chemiluminescence immunoassay to evaluate its performance for critical care areas.

Methods

Blood was drawn in EDTA and serum separator vacutainer simultaneously. Samples from patients and quality control material of Trop-I were analyzed for imprecision, linearity and method comparison on Advia Centaur (Siemens diagnostics), and AQT90 FLEX analyzer (Radiometer) with photometric detection at the section of Chemical Pathology, AKU. Statistical analysis was done using Microsoft Excel and EP Evaluator version 10.3.0.556 (Data innovations, LLC). Quantitative variable were represented in terms of mean \pm SD. For precision the computed SD was compared with allowable random error. Furthermore, Cohen's kappa was applied to observe the agreement between the two methods.

Results

For Trop-I Precision study on POCT analyzer showed CV of 2.4% using pooled patient sample with mean Trop-I of 2.15 ± 0.05 ng/ml. Three standards ranging from 0.034 to 1.316 ng/ml were run in triplicate to verify accuracy and linearity. The Allowable Systematic error (SEa) was 10.0%. The maximum deviation for a mean recovery from 100% was 4.1%. 3 of 3 mean recoveries were accurate within the allowable error. The results were linear with slope 1.04, intercept 0.0. On method comparison, Trop-I showed good agreement yielding a kappa value of 0.95.

Conclusion

We have validated the performance of POCT Trop-I assay against central laboratory immunoassay and found acceptable results. POCT assays should be implemented as fast triage of patients with chest pain is essential to allow for initiation of proper and timely diagnosis and treatment.

An Assessment on Available Laboratory Capacity in Public Hospitals, Afghanistan, 2016

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Introduction

The aim of the study was to determine the capacity, performance, methods, the reasons for not checking other laboratory exams in public hospitals in Afghanistan;

Methods

This study is cross sectional and started on med October 2016 & finalized on December 2016, 34 provinces including 4 regional labs & central public health laboratories was assessed. The data collected by Surveillance provincial officers, reviewed for completeness and understandability. The reasons for not checking some test like reagents shortage, weak capacity of staff, equipment's shortage, recommendation of mentioned labs, was asked. For analysis we used descriptive, analytical, stratified, multivariate approaches.

Results

For hematologic tests public labs were 84% & regional laboratories 78%, For biochemistry tests public labs were 64% & regional laboratories 74%, For microscopic tests public labs were 62% & regional laboratories were 67%, For PCR tests public labs were 9% & regional laboratories were 40%, In rapid diagnostic test, public labs were 65% & regional laboratories are 76%. ELISA tests in public labs were 3% & regional laboratories were 22%, Bacteriologic culturing in public labs were 16% & regional laboratories were 22%, responsive to patient demands. Finally, the public laboratories are 39% & regional laboratories are 76% respondent to patient's demands around the country.

Conclusion

No equitable laboratory services at all level, EPHS laboratory services are not similar, and the rural and remote population have difficulties with laboratories services and cannot provide the demands of community. For strengthening of laboratories, Ministry of Public Health, public health programs, world health organization, other departments within the government and private sector, donors and other potential organizations, e.g., news organizations should improve, investment opportunity, and strength this section in Afghanistan public laboratories.

Evaluation of radiation protection situation in Kabul City Hospitals' X-ray Rooms

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Introduction

Application of ionizing radiation in medicine, for diagnostic and treatment and also in research is inevitable. Ever increasing use of X-ray in radiography might increase radiation dose to the staff and public. Therefore, measurement and determination of radiation dose received by staff and public due to radiography procedures are essential. Increasing use of radiation requires educated personal in the contexts of accurate operation of machines and radiation protection principles. Because, the harm effects of radiation cannot be ignored. The main objective of this study was the evaluation and observation of radiation protection situation in Kabul city's hospitals.

Methods

This study is a descriptive cross-sectional research which includes 20 private hospitals and 20 public hospitals. The study was carried out during 2015-2016. Parameters under investigation were: dose rate in control room, dose rate behind the door, existence of personal dosimeters, lead

apron, leaded wall, leaded window, leaded gloves & glass, radiation protection courses participation by staff, radiation room's dimensions, and radiation signs in radiology department of each hospital. Dose rate is measured by RadEye dosimeters and the dimensions of the X-ray rooms were measured by tape directly. Information about the rest of the parameters were recorded by direct observation or by asking from in charge person and transferred to the prepared questionnaire.

Results

Results showed that among all 40 private and public hospitals in 55% and 20% of them the radiography room's sizes were smaller than standard size of 18m² respectively. Dose rates in micro-Sievert per hour, which is the collective energy absorbed in a point within an hour, at least in 5 points at different hospitals were more than permitted dose rate by international regulation. But annual dose in all hospitals were under standard limits. In addition, it was found that the presence of personal and public radiation protection tools like personal dosimeters, lead glass and others in both private and public hospitals were insufficient or not existed at all.

Conclusion

International standard methodologies are not used during constructing radiology centers, nor did radiation protection principles are properly considered. There is a large gap between Kabul City Hospitals' radiation safety and standard level.

Experiences and perspectives of extra pulmonary Tuberculosis in 15 provinces of Afghanistan: A document review

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Introduction

Tuberculosis (TB) is a major public health problem in Afghanistan. It is estimated that 61,000 Afghans develop TB annually, and only 70% of the cases are identified. 46% are new bacteriological confirmed TB cases and around 26% are extra pulmonary TB (EPTB) cases, but there are no clear guidelines and tools for diagnosis of EPTB and many cases are missed in public and private health facilities. The Challenge TB project supports the National TB Programme (NTP) to develop standard operating procedures (SOP) for management of EPTB in the country. The purpose of this study is to assess the spectrum of EPTB in 15 provinces of Afghanistan and the many challenges and perspectives in the diagnostic and treatment of EPTB.

Methods

This is a retrospective review of EPTB cases reported to the surveillance department of the NTP from 15 provinces during two years' period in 2015-2016 in 15 provinces.

Results

Out of 56925 of all forms of TB cases identified, 14816 were identified as EPTB (26% of all cases), which is close to 78% of all EPTB cases reported nationally in Afghanistan (Figure 1). This group represents the spectrum of EPTB in 15 provinces in the country. 31308 of EPTB were female (55%) and 25617 were male (45%). The ratio of females to males was 2.03:1. Focus group discussion with 30 medical specialists conducted in Kabul discovered that the most commonly affected sites of EPTB in Afghanistan were pleura followed by lymph nodes, central nervous system,

gastrointestinal organs, bones and joints, and genitourinary TB. The geographic location of the population seems to be a concomitant factor.

Conclusions

The magnitude of EPTB is high in Afghanistan and the higher ratio of female to male EPTB cases demonstrated a relatively higher number of female cases. This study also illustrates the varied presentations of EPTB that should be known

Exploring the prevalence of tuberculosis infection among health care workers in Afghanistan: a cross-sectional study

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Introduction

HCWs are at risk of TB infection because of their constant exposure to TB patients. Inadequate use of preventative, poor ventilation at the work place, exposure during procedures like sputum induction and bronchoscopy are the risk factors. Systematic review revealed that the prevalence of latent TB infection among health care workers ranges from 33% to 79%. The aim of this study was to estimate the prevalence of TB infection among health workers in Afghanistan.

Methodology: This was cross-sectional study conducted in 23 provinces of Afghanistan in Sep-Dec 2017. We selected both private and public health facilities using systematic random sampling. The study subjects were health care workers. Tuberculin Skin Test (TST) administered and read as per CDC Atlanta guidelines in forearms of study subjects and read after 48-72.

Results

In total, 2,221 health care workers like doctors, nurses, midwives, lab technicians, vaccinator and pharmacy technicians enrolled in study. The mean age was 33.93 years, mean years of experience was 7.83 year. Also, the mean induration in millimeter (mm) was 11.25(SD=6.6) for all cadres. 203 (9.14%) of health care workers had skin induration of less than 5 mm, 426 (19.18%) between 5mm-9mm and 1,572 (70.77%) had induration of more than 10mm (table 1). Moreover, 25th percentile mean induration was 6 mm, for 50th percentile it was 11 mm and at for 75th percentile it was 15 mm.

Conclusion

The study finding shows that the prevalence of TB infection among health care workers is higher than WHO estimates for general population. Thus, it is strongly recommended to implement TB infection control measures across health sector during design of health facilities and also to promote TBIC practices among health care workers.

Successful soft tissue procedure for restoration of external rotation in an Obstetric Brachial Palsy patient - case report

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Introduction

Obstetric Brachial Palsy is a common problem in developing countries especially with poor methods of child delivery. Afghanistan is one of these countries with higher incidence of Brachial Palsy, yet there is no published data on surgical treatment of this condition.

Case report

We report an eleven years old patient with obstetric brachial palsy presenting with absent active external rotation of left shoulder. During physical exam we found that the passive external rotation in natural position (external rotation-1) of shoulder was 0° and passive external rotation in 90° abduction of shoulder (external rotation-2) was 45°. There was no active external rotation of shoulder. For restoring external rotation of shoulder, through a deltopectoral approach on left shoulder, we cut the Coraco-humeral ligament and lengthened the Pectoralis major tendon through a Z-plasty. We also did tenotomy of short head of Biceps and Coraco-brachialis tendon from coracoid process as well as parital Coracoidectomy. As the last step, we transferred Latissimus dorsi and Teres major tendons to the posterolateral surface of the Humerus. We immobilized patient's shoulder in shoulder spica cast for 6 weeks and re-evaluated the patient in final follow up after two months.

Results

In final follow up, passive external rotation-1 of shoulder had an improvement of (40°-45°), passive external rotation-2 had improved from 45° to (85°-90°), active external rotation-1 of shoulder had improved from 0° to (35°-40°) and active external rotation-2 of shoulder had improved from 0° to (30°-35°).

Conclusion

To the best of our knowledge, this is the first reported case of its own kind in Afghanistan. Successful restoration of external rotation after a soft tissue procedure including tendon transfers in brachial palsy patients with absent external rotation of shoulder is encouraging for further research to explore the potential benefits and long-term outcomes of the procedure.

Deflux (Dextranomer/Hyaluronic Acid Copolymer) Injection for the Treatment of Vesicoureteric Reflux in Children—Two successful cases

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Introduction

Vesicoureteric reflux (VUR) is a common condition that may lead to end-stage renal failure. Treatment options include long term prophylactic antibiotics or surgical intervention. Recently, endoscopic treatment by a subureteral injection of Deflux has gained popularity. The procedure is minor compared with open surgery and when successful. However, primarily due to cost factors, it is not practiced widely in our center.¹

Case Report

A 7 years old girl with complaint of flank pain and dysuria was reported to have right side grade III VUJ reflux in MCUG and mild to moderate hydronephrosis with ultrasonography and a 11 years old boy with bilateral flank pain was reported to have bilateral VUJ reflux as grade III on right and

grade IV on left side in MCUG and bilateral mild to moderate hydronephrosis with ultrasonography.

Endoscopic injection of Deflux was done at right VUJ in both patients and with 3 months follow up vesicoureteral reflux resolution with no hydronephrosis / hydroureter was noticed on right side in either patients

Results

To the best of author's knowledge, it is the first time in Afghanistan that VUJ reflux is being treated with Deflux injection. The procedures were done with no perioperative complications. In literature the success rate by grade of reflux in individual ureters has been reported 82%, 84%, 78%, and 73% for grade 1, 2, 3, and 4 VUJ reflux, respectively.²

Conclusion

Injections of Deflux is an effective treatment for VUR. The complete resolution of disease was seen in patients after a single injection. With this success, we recommend the use of endoscopic Deflux injection as the first line treatment for children with vesicoureteric reflux disease.

Poster Presentations

Presentation
Effective Utilization and Availability Of Isolation Gowns for Infected (MDRO Patients at Tertiary Care Hospital AKUH)
Bacterial Contamination on Mobile Phones of Healthcare Workers: A Literature Review
Breast Cancer n Young Women (35 Years rr Less): 5 Years' Experience at A Teaching Hospital in Pakistan.
Significance of Infection Control Protocol of Nursing Care to Prevent External Ventricular Drain (EVD) Related Infection among Pediatric Age Group of A Tertiary Care Hospital in Pakistan: A Retrospective Study
Child Sexual Abuse in Children with Intellectual Disability; A Literature Review
Advance Roles of Community Health Nurses (Chns) to Improve Health Care System
Some Studies on Microbial Spoilage of Commercially Available Fruits
Is High Availability of Fruit and Vegetable Beneficial for Childhood Anemia? A Cross Sectional Study from Karachi, Pakistan
Congenital Heart Diseases (CHD) Are Lesions Developing During Embryonic Life and Result in Abnormal Formations of Heart Structures. The Proportion And Risk Factors of CHD Among Afghan Population is Currently Unknown.
Ultrasound can Diagnose the Abnormal Located Placental Tissue During Ante-Natal & Post-Natal Period.
The Outcome of Lumbosacral Discectomy at Different Levels
"Ultrasound Can Diagnosis the Fetal-Nuchal-Cord During 3rd-Trimester Of Pregnancy
Fetus in Fetus or Fetiform Teratoma? Report of Two Extremely Rare Entities with Very Similar Imaging Features.
PMTCT and Management of HIV-Exposed Infants
We Need Higher Education: Voice of Nursing Administration from Kabul, Afghanistan
A Patient Safety Initiative: "Preventing Errors in Radiology Requisite Form.
Role of Nurses in Promoting Client's Privacy During Childbirth
Jejunojejunal Intussusception Cause by Intestinal Polyp in A 17 Yr Old Boy with Peutz-Jeghers Syndrome: A Case Report
Incidental Finding of Cardiac Hydatid Cysts in Young Adults; A Case Series
The Ideas Of Afghan Physiotherapists about Evidence Based Practice - A Survey Research
Parasitic Twin- A Case Report
Igg4-Related Disease in Pakistan: Where Do We Stand?
Hypoparathyroidism
What are the Barriers for Improvement of Mental Health Services in Low-Income and Middle-Income Countries? A Systematic Review, 2017

Presentation
Colonic Pseudo-Obstruction (Ogilvie Syndrome)
Epidemiology of Brain Tumors in Neurosurgery Department of Aliabad Hospital, Kabul University of Medical Sciences.
Uterine Vasculature Ligation for Management of Postpartum Hemorrhage Can Cause Uterine and Ovaries' Necrosis and Risk of Developing Postoperative Sepsis in A Woman
A Case Report of Lip Hemangioma Treated with Sclerosing Agent in FMIC
Positive Psychology and Patients Well-Being
Hand Hygiene: An Interventional Study to Increase the Compliance in Secondary Hospitals.
Mentorship Addresses the Gaps Correctly and Timely Through Appropriate Interventions
Methylmalonic Aciduria: Four Years' Experience of Etiological Classification & Outcome of Patients at Tertiary Care Centre in Pakistan
Hypophosphatasia in Paediatric Population: An Experience from A Tertiary Care Center of Pakistan
Hyperoxaluria: An Experience from Clinical Laboratory of Tertiary Care Hospital Of Pakistan
Clinical Characteristic and Immediate – Outcome of Children Mechanically Ventilated in Pediatric Intensive Care Unit
Existing Nutritional/ Food Practices Carried Out by Pregnant Women During Antenatal Period Residing in Peri-Urban Setting of Karachi; An Exploratory Study
Integration of Mental Health to Lady Health Workers Programme in Pakistan
Holistic Approach is the Only Way to Increase Uptake of Family Planning Services
Internal Carotid Artery Free Floating Thrombus, Rare Cause of Stroke in A Young Patient, Case Report
Inherited Metabolic Diseases (IMDS) in The Developing World: No Time to Lose
Relationship between Childhood Nutrition and Premenstrual Syndrome
Exploring Gender and Age Distribution of TB Cases Among Contacts in Afghanistan (2017)
Exploring The Effectiveness Of Survived TB Patients at TB Case Fining In Afghanistan (2016-2017)
Effect of Urban DOTS Expansions in Kabul Prisons on Tuberculosis Treatment Outcome
Sleep Duration and Factors Associated among Preschool Children in Karachi, Pakistan
Role of Active Follow-Up of Child TB Patients by Phone on Tuberculosis Treatment Outcomes in Kabul
Risk Factors Associated with Breast Cancer. An Audit of Proforma filled Prior to Mammography in Tertiary Care Hospital

Effective utilization and availability of Isolation Gowns for infected (MDRO patients at Tertiary care Hospital AKUH)

Zuhra Kashif, Arsheen Imran, Rozina Roshia,
The Aga Khan University Hospital Zohra Rafique

Introduction

In the month of February, 2016, during daily round of infected patients, it was observed that isolation gowns are not present at point of care most of the time. The reason identified was the inadequate availability of isolation gowns to the extent of need of patients with contact precautions. The objectives were to identify the gaps in providing safe care to the infected patients and take further steps to prevent transmission of infection through adequate availability of isolation gowns per infected patients to ensure health care workers' and patients' safety.

Methods

Data collection on availability of isolation gowns was done for each patient with contact precautions in March, 2016. Record reviewed to see the number of isolation gowns provided to the selected wards. Daily observation method was used to see the accessibility of isolation gowns in ward and the point of care. Discussions done with Head of Linen Department regarding the actual quantity of supply to the selected wards & possible investigations to be done in this regard. Interviewing of the staff about non-compliance to standard guidelines. More than 20 Education sessions taken on proper use of isolation gowns in identified wards.

Results

Out of the 501 patients with contact precautions in the month of March 2016, 73 patients were not having isolation gowns. During intervention period in the month of April to May, compliance increases from 85% to 93%.

Conclusion

Problems were identified at both side availability and compliance, literature supports that isolation Gowns are identified as the second-most-used piece of PPE, following gloves, in the healthcare setting. Therefore, it is the responsibility of both, the system & the staff for the availability & proper utilization of the isolation gowns according to need to follow the standards of isolation to prevent such challenges in future.

Bacterial Contamination on Mobile Phones of Healthcare Workers: A

Literature Review

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Introduction

With all the achievements and benefits of the mobile phone, it is easy to overlook the health hazard it might pose to its many users. The constant handling of the mobile phones by users (in hospitals, by patients, visitors and health care workers etc.) makes it open breeding place for transmission of microorganisms, as well as Hospital-Associated Infection. The aim of this literature review is to make people aware that their mobile phones can transmit more than just a call.

Method

Research articles from 2011-2017 were selected and reviewed to find different views. In all the articles mobile phones have been aseptically swabbed and were inoculated on different agars to see the growth. In 2011 research article the tests have been performed on the mobile phones of common people and in 2012-2017 articles it is done on mobile phones of HCWs.

Findings

Literature revealed that the most of the mobile phones were contaminated with *Bacillus cereus*, *Staphylococcus aureus*, *Escherichia coli*, *Enterococcus faecalis*, *Salmonella* spp. *Pseudomonas aeruginosa* etc. In the research done in 2011 antibiotic susceptibility test is also mentioned in which *Salmonella* spp. and *Shigella* spp. showed the most resistance to the antibiotics while *Escherichia coli* was the most susceptible bacteria to antibiotics.

Conclusion

Periodic cleaning of mobile phones with disinfectants or hand cleaning detergents as well as frequent hand-washing should be encouraged as a means of curtailing any potential disease transmission. (233 words)

Breast Cancer in Young Women (35 Years or Less): 5 Years' Experience at a Teaching Hospital in Pakistan

Ahmed Nasir Hanifi

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Introduction

Fewer than 5% of all breast cancers are diagnosed in women under the age of 40 in US. Despite young age, the tumors tend to be advanced by stage and triple negative by molecular phenotype conferring poor prognosis. The objective of the study was to study the histopathological features of 71 breast cancers in young women reported at the Department of Pathology, Fatima Memorial Hospital (Lahore) during the period of last 5 years.

Methods

Routine H&E staining and immunohistochemistry (IHC, wherever applicable) were performed on every breast cancer case. The results were interpreted by the histopathologists and reported. The histopathology reports from January 2011 to August 2015 were retrieved and the data was analyzed.

Results

Out of total 548 diagnosed breast cancer cases during the five-year study period, 71 (12.9%) of the breast cancers were in women aged 35 or less. Around 60% of the cases were in the age group of 31-35 years. The cancer involved left breast in 40 (56.3%) cases, right breast in 20 (28.2%) cases and both breasts in 2 (2.8%) cases. The side of specimen was not specified in 9 cases. The diagnosis of invasive ductal carcinoma (IDC) was rendered in 65 (91.5%) cases, invasive lobular carcinoma in 1 (1.5%) case and invasive mammary carcinoma (IHC recommended) in 5 (7.0%) cases. Regarding

histologic grade, 32 (45.1%) were grade 2 and 39 (54.9%) was grade 3. The tumours range in size from 22mm to 80mm. Among 9 cases with available T staging data, pT2, pT3 and pT4 cases were 5, 3 and 1 respectively. Pathological N staging was available in 6 cases which showed 2, 1 and 3 cases of pN0, pN1a and pN2a respectively. Receptor studies for molecular subtyping were available in 27 cases which showed 18.6% luminal A (ER+, HER2-), 33.3% luminal B (ER+, HER+), 37.0% triple negative (ER-, HER2-), and 11.1% HER2 only (ER-, HER2+) subtypes.

Conclusion

Breast cancer in young women is more prevalent in our population than the West. Left sided cancer is the most frequent side and IDC is the most frequent type in these cancers. The tumours have high histological grade and advanced pathological stage. Triple negative/basal-like is the most common molecular subtype. Our findings are in accordance with the available literature.

Significance of Infection Control Protocol of Nursing Care to Prevent External Ventricular Drain (EVD) Related Infection among Pediatric Age Group of a Tertiary Care Hospital in Pakistan: A retrospective study

Farah Wasaya

The Aga Khan University

Objective

Being an invasive procedure, External Ventricular Drain (EVD) carries infection risk which is preventable. Therefore, the aim of the study is to analyze the significance of nursing care with a strict infection control protocol to prevent EVD related infections.

Methods

The retrospective study was done at the Aga Khan University Hospital, Karachi for all the pediatric patients who have undergone EVD placement surgeries from January 2007 till December 2014.

Results

The indications for EVD include hydrocephalus, traumatic brain injuries, meningitis, hemorrhages, brain tumors and VP shunt malfunctions. The infections associated with were found in 25 out of 117(14.1%) cases. Factors associated with these infections are analyzed in relation to infection control protocol.

Conclusion

EVD infection was found in 14.1% of patients who were nursed using infection control protocol.

Child Sexual Abuse in Children with Intellectual Disability; a Literature Review

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Introduction

Children with intellectual disabilities are approximately four times at greater risk for sexual abuse than non-disabled children. Studies suggest the most reported forms of abuse in these children

include physical, emotional and sexual abuses. This paper aims to highlight Prevalence, major factors and propose recommendations for reducing sexual abuse in children with intellectual disability (ID).

Methods

A systemic review of recent 17 articles (2009-2017) from scientific databases such as PUBMED, Science direct, CINAHL, Medline and Sage was conducted. Out of 25 articles, 17 articles were selected that met the inclusion criteria.

Results

The selected articles proposed factors including; Child related factors (nature and extent of disability, dependence on caregivers, lack of sexual health education), Caregiver related factors (fear and embarrassment regarding sexual health education, negligence of sexual health of an ID child, insufficient communication techniques for discussing sexual health with an intellectually disabled child), Societal related factors (stigma regarding intellectually disabled children), Judiciary related factors (weak policies, lack of child protection institutes). However, based on these factors, prevention and interventions were proposed at three levels; Primary, secondary and tertiary. The interventions at each level were further elaborated targeting the crucial role played by caregivers (formal/informal), institutions and government in reducing the incidence of child sexual abuse in ID population.

Conclusion

In conclusion, Child sexual abuse in ID population is a distressing and hidden issue. Therefore, a prompt action is required to safeguard this vulnerable population

Advance roles of Community Health Nurses (CHNs) to improve health care system

Sarmad Muhammad Soomar, Umair Umed Ali

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Introduction

Promoting good health is a fundamental approach of nurses at any instance. The growing era for the improvement of healthcare focuses on preventive role of nurses as well. This focus is developed in order to improve the health of individuals and families who are at risk or may require preventive guidelines to improve health for future. Nurses working or residing in communities play essential roles to help members of the society to get vaccinated get their routine injections done or may be hemodynamic monitoring. In addition, at some instances nurses might support the emergency situations of members living nearby because of moral obligations. Seeing this we can notice that there are no any specific community health nurses, exception of midwives is available to support this role and do preventive tasks and mitigation for community members' health. Especially in Pakistan the role is not develop to such extent so that nurses can take the community nurse as designated job. So that nurses can plan and implement health strategies on basis of their individual and advance roles in community. The objective of the study was to identify advance roles of CHNs in promoting health and improving healthcare system

Methods

The study was based on observations that were done while exhibiting the advance role of community health nurse. The activity was a community health project, as part of community health nursing course in final year BSN program. The observations done while involvement in the project to get the insights of how community health nursing cycle runs in a designated locality to promote health and prevent diseases and how nurses follow the cycle to accomplish their tasks by achieving their roles as CHNs.

Results

The observations provided insights to understand the significant role of CHNs in inspections and assessments, advocacy, education, guidance and counselling, catalysing and collaborating, being clinicians and provide care, they also contribute to the policies and structures of system. In addition, they are the emerging leaders of health care in the community and locality and they also involve in research to work more on community needs, strategic planning, innovative ideas and evaluating the outcomes.

Conclusion

CHNs are significant people as nurses in improving healthcare system and promoting health. Their roles and tasks provide important insights at a bigger level to help community and improve their status of health. There should be allotting of CHNs in Pakistan properly after the revival of this concept. Also, proper trained professionals, who have an optimal degree and have ability and experience to work in a community setting on quality standards and master the advance roles to work in community setting, should be brought at the fore front.

Some studies on microbial spoilage of commercially available fruits

Salman Muhammad Soomar, Sarmad Muhammad Soomar
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Introduction

Microorganisms are everywhere. They can be found in the air, in water, in soil, on animals, and even on humans. Some are beneficial, such as those used to make fermented dairy and meat products. Others cause spoilage of various food products. Eating fruits is a healthy practice due to its nutritional composition but when it gets spoiled by microbes, it can be harmful for human consumption. Microorganisms have been reported to cause extensive deterioration of fruits. Some of these microorganisms cause rotting, discoloration or fermentation of the fruits which affect their preservation. Research was done to identify and analyse microbial diversity that cause the spoilage.

Methods

Pour plate method was used for the isolation of microbes from spoil fruit. A portion of the fruit was aseptically inoculated into the beaker; it was homogenized and then diluted. The colonies were identified by standard bacteriological procedures. Gram's staining was performed to determine if

the organism is gram negative or gram positive. Further confirmatory biochemical tests were done such as catalase, coagulase and oxidase. The identification of the isolated fungi was done both macroscopically and microscopically.

Results

This research revealed that the rotten or spoiled fruit possess appreciable number of microbes. The Microorganisms isolated and observed were bacteria and fungi majorly. This is due to various processes taking place in the rotten fruit which favoured bacterial and fungal growth. It could also be as a result of the moisture content of the fruit as well as the difference in the nutritional composition of the fruits. This work finds that there are microorganisms that could be responsible for inducing spoilage in the fresh fruit.

Conclusion

Fruits are a good source of nutrient and could be used for many applications. However, to reduce the susceptibility of the fruit to microbial spoilage and to ensure its effectiveness in different applications and safety measures should be taken. Hence if you want to prevent spoilage of food by micro-organisms, you must remove the conditions which are appropriate for their growth and preserve them with the best possible techniques.

Is high availability of fruit and vegetable beneficial for childhood anemia? A cross sectional study from Karachi, Pakistan

Abid Hussain, Romaina Iqbal, Iqbal Azam, Naveed Janjua and Sameera Rizvi,

Abid Hussain, Romaina Iqbal, Iqbal Azam

Aga Khan University Karachi, Pakistan. Naveed Janjua is affiliated with University of British Columbia, Canada.

Objectives

To estimate prevalence of anemia and explore the community, household and individual level factors associated with Anemia among children aged 1-5 years in two peri-urban communities of Karachi, Pakistan.

Methods

This was a community based cross-sectional study conducted from March- June 2014. Systematic sampling method was used and sample size included 494 children. Information on infections, breastfeeding, and daily food intake was collected through a structured questionnaire. Anemia was measured through Hemocue method. Data was analyzed by binary multilevel logistic regression.

Results

Total 257(52%) were males and 253(51.2%) were in young age (1-2.9years). The prevalence of mild, moderate and severe anemia in children aged 1-5 year was 17.6 %(n=87), 57.7 %(n=285) and 14.8

%(n=73), respectively. The community level factors that were found to be associated with anemia were living in neighborhoods with high availability of fruits [Adjusted Odds Ratio (AOR) =0.3, 95% Confidence Interval (CI): 0.1-0.6], and high number of meat and dairy product and vegetable shops (AOR=0.4, 95% CI: 0.2-0.9). The individual and household factors found to be positively associated with anemia were younger age (AOR=2.0, 95% CI: 1.3-3.1), not being vaccinated (AOR=1.9, 95% CI: 1.0-3.6) and mothers with 4-6 alive children (AOR=1.9, 95% CI: 1.2-3.1).

Conclusion

The risk factors for anemia among children included younger age, not being vaccinated, and mothers with higher number of alive children, while living in neighborhoods with availability of food and fruit markets was protective against anemia.

Congenital heart diseases (CHD) are lesions developing during embryonic life and result in abnormal formations of heart structures. The proportion and risk factors of CHD among Afghan population is currently unknown

Mohibullah Ahmadzai

Cardiology Services French Medical Institute for Mothers and Children

Introduction

Congenital heart diseases (CHD) are lesions developing during embryonic life and result in abnormal formations of heart structures. The proportion and risk factors of CHD among Afghan population is currently unknown. The purpose of this study is to define the burden of CHD and its associated factors in a tertiary care hospital in Afghanistan.

Methods

A cross sectional analytical study design was used to answer the research questions. A sample of 124 patients was selected from FMIC, Afghanistan. The demographic and clinical variables were determined using a questionnaire prepared by the researcher. The association between CHD and variables was determined using chi-square test of independence and t-test for two independent samples.

Results

Out of 124 participants, 27 (21.77%) study participants were CHD negative and 97 (78.23%) of participants were CHD positive. Among CHD positive patients, 64 (65.97%) of them had Acyanotic CHD and the rest of them had cyanotic CHD 33 (34.02%). The most frequent CHD in Acyanotic CHD positive subjects was VSD 24 (37.5%) followed by PDA 16 (25%) and the most frequent CHD in cyanotic CHD positive subjects was TOF 11(33.3%) followed by D- TGA 6 (18.18%). The Down syndrome was the most common associated somatic anomaly in CHD positive arm. With regard to factors associated with CHD, economic status was found to be significantly associated with CHD.

Conclusion

The current study findings revealed that proportion of CHD is 73.28% among afghan children with male predominance. Our study revealed a strong relation between low socioeconomic status and CHD in our society. Hence, an effort for enhancing the awareness of disease among low socio-economic population is greatly required.

Ultrasound can diagnose the abnormal located placental tissue during ante-natal & post-natal period

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Introduction

Placenta Increta is a serious complication of pregnancy (1). The placental villi extend beyond the confines of the endometrium and invade the myometrium and accounts for ~17 % (2) to 20%.

Methods

Ultrasound revealed the placental-lobe or multiple-lobes of placenta seen in myometrium & focal obliteration of the hypochoic retroplacental zone (3). Finding reconfirmed by MRI & Histopathology Report.

Case Report

A 22-year woman with para1+0 was admitted during the 23weeks with IUD for termination of pregnancy. On admission, her hemoglobin was 5.3 g/dL, 5points-packedcell transfused and other laboratory-investigations were normal. Patient was aborted IUD macerated fetus of 1.2 kg female but Placenta was not removed. D&E was done under GA during procedure difficult in removal placenta deeply adherent. Post-operative-ultrasound done which shows suspicious of placenta Accreta. MRI done (OSR) shows only RPOCS. 2nd D&E done and RPOCS removed. Scan done after Re-D&E that showed Bulky uterus with a large ill-defined heterogeneous enhancing area in the right fundal region extending up to the serosal surface and protruding into the endometrial cavity as well, suspecting placental inside the myometrium. Three doses of injection-methotrexate given. Patient was LAMA. Patient again admitted with principal diagnosis of morbidly adherent placenta associated with anemia, Her HB was 6.9 g/dL , so 3pints-packedcell transferred. Second MRI confirmed Increta from AKUH. Total abdominal hysterectomy was done. Patient was discharged in Stable-condition. Histopathology report Confirmed placenta Increta.

Results

In our case ultrasound study showed heterogeneous enhancing area in the right fundus-upper posterior region extending up to the serosal surface and protruding into the endometrial cavity as well as, and confirmation can be made using diagnostic MRI or post-operative Histopathology Report.

Conclusion

Ultrasound is a Primarily tool to diagnose the abnormal located placenta.

The outcome of lumbosacral discectomy at different levels

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Abstract

Back pain has a wide range of causes, in our neurosurgical setup we titrated the patients who had radicular pain in the lumbosacral area both evident clinically and radiologically. This study was to find out that whether the lumbar disc prolapse at different level influence the functional outcome of patients after discectomy. 136 patients of age group between 19-77 years were included in this study.

Objectives

To compare pre-operative and post-operative leg pain and back pain by Visual Analog Scale Score. Functional outcome by 0odified Oswestry Disability index score of the selected patients.

Methods

This study was a descriptive study, conducted from January 2017 to December 2017 in Amiri Medical Complex, kabul Afghanistan. We prospectively followed 136 patients with no sex predilection having lumbosacral disc herniation. Level was confirmed on MRI either at L2-L3, L3-L4, L4-L5 or L5-S1 levels requiring surgery. The procedure performed was conventional lumbar discectomy in all patients.

Results

A total of 136 patients were included in our study of which 10 had prolapsed intervertebral disc at L3-L4 level. 74 patients had disc prolapsed at L4-L5 level and 52 patients had disc prolapsed at L5-S1 level. On comparing the results after discectomy of prolapsed intervertebral disc at different levels in the lumbar spine we found no significant difference in the end result and functional outcome of the patients.

Conclusion

The aim of this study was to find out that whether the lumbar disc prolapse at different levels influence the functional outcome of patients. According to the observations of this study and after reviewing various similar studies done in the past we conclude that after discectomy, level of disc prolapse per se has no significant bearing on functional outcome of the patients.

Ultrasound can diagnosis the Fetal-Nuchal-cord during 3rd-trimester of pregnancy

Mumtaz Malik

Introduction

Nuchal cord is a term given to the situation where there are one or more loops of umbilical cord wrapped around the fetal neck for $\geq 360^\circ$.^[1] Nuchal cords are common, with prevalence rates of 6% to 37%. Up to half of nuchal cords resolve before delivery. The purpose was to evaluate the role of 3rd trimester ultrasound in the diagnosis of Nuchal-Cord, when patient came for ultrasound with complain of less fetal movement >12hours. The outcomes of labor or LSCS and the neonates were obtained from the patient'MRF.

Methods

Use Quantitative-research-approach & collected all data from Radiology-Information-system & Medical-Records-Files during from Oct,2017 to April,2018.

Ultrasound protocols: using gray-color-Doppler-imaging of all patient in 3rdtrimester with complaint of less fetal movements >12hours.Presence of the cord was sought in the transverse and sagittal plane of the neck of the fetus. A nuchal cord was diagnosed if the cord was visualized lying around at least 3 of the 4 sides of the neck or loops of the cord wrapped around the fetal neck with color flow present on Doppler interrogation. An appearance of a small dent or impression due to compression of the fetal neck may also be present (termed the divort sign).

Results

100% cases [n49] of our study were presented with complain of less fetal movement with >12hours. A nuchal-cord was present in 10.2%[5/49x10:10.2%] of deliveries. A single loop of cord was seen in 2.04% while double or more loop seen in 8.16 % of cases.2.04% cases have polyhydramnios.6.12%[3/49x100] cases of nuchal-cord were delivered with SVD & 4.08% underwent LSCS due to previous-Scare. The presence of a nuchal cord at delivery was not associated with parity,age, increased/ReducedAFI. The presence of a nuchal cord was not associated with a significant increase in the risk of Cesarean section in our study. All delivered baby[04Girls-oneboy] have Apgar-Score 8/1,9/5minutes, all are discharged with stable condition.

Conclusion

Ultrasound is a First line of tool to diagnose the Nuchal-cord in 3rdtrimester.

Fetus in Fetus or Fetiform Teratoma? Report of two extremely rare entities with very similar imaging features.

Fazel Rahman Faizi

Radiology department, French Medical Institute for Mothers and Children

Objectives

The purpose of this study is to describe the imaging features of two extremely rare similar appearing entities with different etiologies. And to describe the differing features of each one from the imaging perspectives.

Methods

Two children with abdominal and lumbar masses were referred to the radiology department of French Medical Institute for Mothers and Children. Patients underwent ultrasound, CT-scan and subsequently surgery.

Results

One patient had an anterior abdominal mass containing liver, fused kidneys, hepatic parenchyma, femur, pelvic bones and some brain tissue which are typical imaging features for Fetus in Fetu. The other patient had lumbar mass containing highly-developed bowel loops, lymph nodes and mesentery. No axial skeleton was detected in the latter one. The imaging findings were confirmed by surgery.

Conclusion

Fetus in Fetu is an extremely rare abnormality that occurs secondary to abnormal embryogenesis in a monochorionic diamniotic pregnancy where a non-viable fetus becomes enclosed within a normally developing fetus. Fetiform teratoma is a rare, highly developed mature teratoma showing organoid differentiation, although, not complete enough to be classified as Fetus in fetu. The differing feature of the latter one is the presence of axial skeleton.

Very few cases of Fetiform teratoma have been reported in English literature; however, to the best of my knowledge, lumbar Fetiform teratoma has not been reported up to date.

Assessment of PMTCT and management of HIV-exposed infants

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UNDP HIV program officer

Introduction

About 7500 people are estimated to be living with HIV in Afghanistan. One of the priority areas for the third National Strategic Framework (NSFIII) for HIV/AIDS response in Afghanistan is to expand accessibility and coverage of comprehensive and integrated HIV treatment, care for people living with HIV and their families.

Methods

A review was conducted on the following components of the HIV Care and Treatment System: Set-up and organization of the HIV Care and Treatment Services; HIV Testing Services (HTS);

Antiretroviral Therapy. On each of these elements, data were collected and analyzed to answer five basic questions. Are the right things being done? Are they being done in the right way? Are they being done on a large enough scale? Are the right people being reached? Is the programme making a difference?

Results

Currently, there are separate guidelines for PMTCT and ART in Afghanistan. Follow-up of HIV-exposed infants until a definitive diagnosis is one of the activities in the 2016-2020 strategic plan. A definitive diagnosis provides the MTCT transmission rate which is an impact measure of PMTCT interventions.

In Kabul ART centre, at the time of the assessment, out of 78 females aged 18 years and more, 19 (24%) had become pregnant. Almost all the KIs from other ART centres also reported pregnancies among women on ART. It is not clear if these pregnancies were planned or not. Women living with HIV planning to conceive need counselling and support from health care. Women who do not plan to have a pregnancy at all or soon should be provided with dual family planning methods

Conclusion

First line ART regimen should be used for pregnant and breastfeeding women irrespective of gestational age. All facilities offering ART should set up a system for follow-up of HIV exposed infants until a definitive diagnosis is made. There is need to seek guidance and support from the reproductive health division of the Ministry of Public Health.

We need higher education: Voice of nursing administration from Kabul, Afghanistan

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French Medical Institute for Mothers and Children

Aim

To explore the educational profile of nursing managers and head nurses at public hospitals in Kabul, Afghanistan.

Methods

A descriptive cross-sectional study design was employed .A self-administered pre-tested questionnaire was used to recruit 86 nursing managers and head nurses from 17 public hospitals in Kabul. SPSS version 19 was used to analyze and report the data through descriptive statistics.

Results

It was found that, none of the participant was prepared with higher education in nursing; rather they had only diploma in nursing; and 84.9% of them had completed their nursing diploma before 2002.; 11.6% of participants were currently studying; and all were in non-nursing disciplines. On the other hand, 100% of the participants expressed intention for further studies mainly in

leadership and management, computer skill, English language, in-service nursing trainings and higher education in nursing.

Conclusion

This study suggests that there is a dire need to design both short and long-term strategies for the capacity development of nursing leaders at public hospitals in Kabul, Afghanistan.

A Patient Safety Initiative: “Preventing Errors in Radiology Requisite Form [Rrf]

Mumtaz Malik

The Aga Khan Hospital for Women & Children, Kharadar. Karachi.

Introduction

Major causes are happening in worldwide is Deficiency in the filling of radiology-request-form.³ Errors in the act of prescription & issues of System can creating errors in medical decisions cause harm to patients (1).

Objective

Radiology request is a clinical document filled by licensed physician. Any error in Radiology-Requisite-Form leading to Patient-Identification-Error, Unnecessary wrong side x-ray-exposure, Ultrasound of Wrong-Organs, Increased Radiation-Hazard in Fetuses & many more bad-consequences produce in Patient-Health. Reviewed all the Radiology-requisite- forms from 1/1/2017 to 30/6/2017 & observed that almost >70% RRF were Incomplete <30% columns RRF. To provide optimal knowledge about patient Name, MR#, Medical & Surgical history, High-Risk & clinical-status as well as clearly write require procedures' name in the RRF. Target is to Complete & Correct filled RRF by Primary-Physician during 1/7/2017 to 31/12/2017.

Methods

Data collect from RRF, Digging Forms from filled by Primary-consultant, RIS, MR File & payment slips from 1/1/2017 to 30/6/2017 [Pre campaign] & 1/7/2017 to 31/12/2017 [Post campaign]. We use Quality Improvement Tools of PDSA cycle, High-Risk-Analysis, Fish-bone and Prieto-graph & Process-flow-RFMEA in our project. Prepare a check-list to identify the incomplete filled RRF & its poor consequences. Multiple Awareness-session was done.

Result

Reviewed the 350 RRF after these two long-campaigned of disseminated-knowledge about how to fill the RRF & its benefits for quality of Radiology-examination & report, we observed that almost >23 % RRF were still Incomplete with > 75% & 77% completed form with 100% column by Primary-Physician. Overall Improving the filled RRF from 35%-77%. Improved Knowledge about RRF 30%-95%. Initiative White-sticker on All OPD-Documents, including RRF. Enhanced Team-work b/w Staff. Complete RRF with LMP data has improved the Growth-ultrasound with reporting & Discontinuation of Radiation Exposure in early First Trimester in Pregnant Woman. Improved Complete number of RRF reduced the Repeat Exposure Rate.

Conclusion

We analyzed at the end of this project that we have to start online radiology request form in future.

Role of nurses in promoting client's privacy during childbirth

Asma Amir Ali, Registered Nurse
Aga Khan University

Objective

Animals, either wild or domestic animals find out quite, hidden, and private place to give birth to their babies, but I wonder, there is something which needs to be learned from animals. That is an apparent need of seclusion and privacy during labor. This is a basic human right. Safeguarding those rights and recognized their needs with respect to an individual's physical privacy is an integral duty of a nurse. However, in today's health setting it is increasingly challenging to protect the rights of privacy of the patients. The purpose of this paper is to emphasize on the importance of a patient's privacy during labor.

Methods

The method used is the literature review. Recent literature from the period of 2002 to 2014 has been used in this review. We used articles from different search engines including Science direct, Cinahl, Pub-MED, and Wiley online library.

Results

Lack of privacy resulting from nurses negligence to apply theoretical knowledge in clinical settings, their task oriented behavior, their lack of advocate behavior to make a decision to resolve ethical problems, and the uncomfortable and overcrowded environment of the hospital. Moreover, when women do not feel comfortable, protected and safe during labor, catecholamine stress hormones released that slows down or stop the progression of labor that's why maintaining privacy of laboring women is not only important to protect client's rights and dignity but it is also important for their smooth delivery.

Conclusion

It is increasingly important to ensure privacy within the health care setting to prevent complications during labor. Therefore, maintaining patient's privacy and respect the patient's dignity is an integral duty of the nurses.

Jejunojejunal intussusception cause by intestinal polyp in a 17 yr old boy with Peutz-jeghers syndrome: A case Report

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Introduction

Peutz-Jeghers syndrome is a rare autosomal dominant disorder characterized by intestinal hamartomatous polyps and mucocutaneous pigmentation. The polyps can cause small bowel intussusception and bowel obstruction, Intussusception frequently seen in children but rarely in adults.

Case Presentation

A 17 yr old boy admitted in Emergency department and complaining of acute periodic abdominal pain associated with vomiting, abdominal U/S revealed small bowel intussusception, laparotomy performed for patient and the finding was a large polyp in jejunum acting as lead point for intussusception

Conclusion

Intussusception with Peutz-Jeghers syndrome is a rare finding, which is mostly jejunoileal or ileoileal. Few cases of intussusception is reported in literature, this is the first case seen in FMIC.

Incidental finding of cardiac hydatid cysts in young adults; a case series

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Introduction

Hydatid cyst is a parasitic infection which can affect any organ of body. It can be found regularly in some organs like liver and lungs while in few organs it is very rarely reported one of which is heart. The objective of the study was to present a rare clinical entity of incidentally detected cardiac hydatid cysts in three young patients

Method

Case series

Result/case presentation

Authors present three cases of cardiac hydatid cysts in young adult patients diagnosed during one-year at author's institution by computed tomography. Two of the patients had simultaneous lung and liver hydatid cysts and complained from shortness of breath and cough, while the third patient had only liver and cardiac hydatid cysts. In all three cases the cysts were located within the left ventricular wall

Conclusion

Cardiac hydatid cyst is a rare incidental finding usually in simultaneous occurrence of liver and lung hydatid cysts. Cardiac hydatid cysts may be suspected in patients living in endemic areas. Echocardiographic follow up of patients with liver or lung hydatid cysts can be helpful.

The Ideas of Afghan Physiotherapists About Evidence Based Practice - A Survey Research

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Introduction

Evidence-based practice (EBP) is the explicit use of current best evidence in making decisions about the care of individual patients and is a concept of growing importance for physiotherapy.

Purpose

What are the ideas of physiotherapists about EBP? The aim of the present study was to investigate Afghan physiotherapists' ideas, attitude, knowledge, training requirements and barriers to EBP.

Methods

A survey questionnaire was sent to 200 physiotherapists working in hospitals, nongovernmental organizations (NGO) and in private practice. One hundred and twenty-six were completed.

Results

Sixty-eight percent of the respondents were male, and were from 10 different provinces of Afghanistan. The highest number (91%) of respondents had a 2-year diploma and 8% had a bachelor degree in physiotherapy. Physiotherapists were asked about the usefulness of EBP, 82.5% of the respondents said that EBP is useful for their daily clinical practice while 11.1% of the respondents mentioned that it is not useful. Eighty-eight per cent of the respondents agreed that EBP is necessary for their daily practice, 90% said they need to increase EBP in their daily practice and 84% agreed that EBP improves the quality of patient care. Seventy-three percent disagreed that strong evidence is lacking to support the most of the interventions they use. Three quarters of the respondents agreed that patient preference influences the treatment choice. Eighty-three percent agreed that EBP helps in clinical decision making.

Conclusion

Results suggest that Afghan physiotherapists had a positive attitude towards EBP. The respondents also felt the need to improve their knowledge and physiotherapy skills for practicing EBP. Respondents listed barriers to EBP such as lack of access to evidence research resources and lack of access to computers and internet. The recommendation to the stakeholders of physiotherapy profession in Afghanistan is that they must consider these barriers and provide the

resources for easy access of knowledge about EBP. Through the result of this study the institution, NGOs, government and nongovernment hospitals and association will plan their capacity development program for Afghan physiotherapists.

Parasitic twin- a case report

Jamshid Sadiqi, Hidayatullah Hamidi

Introduction

Parasitic twin is a subtype of conjoined twins which is an extremely rare congenital anomaly with estimation of 1 per 500000 live births. It is a product of monozygotic twin pregnancy which one fetus stops developing but exist attached to other developing alive fetus. It is usually due to incomplete separation of the fertilized ovum. The parasitic twin can be attached to different parts of the host twin such as retroperitoneum, abdominal wall, back, gastrointestinal tract and sacrococcegeal regions. This anomaly can be associated with other congenital abnormalities as well. The conjoined twins can be diagnosed by antenatal ultrasound as early as 9th week of gestation with further investigation through MRI and echocardiography. The usual treatment is surgical excision of the vestigial part. The less degree of parasitic fusion with host body and absence of other congenital malformations result in better surgical outcomes. Here we present a sacrococcegeal type of parasitic twin.

Case presentation

A nine months old baby by having an extra limb within his legs was referred for pelvis CT scan with contrast. The examination was performed by 128 multi detector Siemens CT scanner. The CT images show under-developed fetus attached in the sacral spine with the host locating in the pelvis of the host. The parasitic fetus has small deformed skull, deformed partially developed spine, few ribs, deformed scapula, a pelvis bone with a complete lower extremity and a well-defined enhancing kidney. Some segments of bowel loops are also seen within the under-developed fetus.

Conclusion

Parasitic twin is a congenital anomaly which is characterized by existence of a vestigial body part of a non-viable fetus inside the body of host twin. The treatment of choice for these patients is surgery. Prior to excision of the parasitic part, the cross-sectional imaging from the conjoined region would be helpful for the surgeon to have a better decision regarding the surgical procedure.

IgG4-related disease in Pakistan: where do we stand?

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Objective

To determine the clinical and pathological features of IgG4 related diseases (IgG4RD) in patients being tested for serum IgG4.

Methods

Patients tested for serum IgG4 from May 2015 to August 2017 at the Section of Chemical Pathology, AKU were included. Ethical review committee's approval (3871-Pat-ERC-15) was sought and patients were called, informed consent and clinical details were obtained. Inability to respond to 4 phone calls (days 0,1,7 and 14) led to exclusion from the study. Laboratory, biopsy and radiologic findings were noted from medical records of inpatients. Serum IgG4 was analyzed using Binding Site kit on Beckman-IMMAGE800 Analyser. "Comprehensive diagnostic criteria for IgG4RD, 2011"[1] was used for labeling IgG4RD: 1. Positive clinical history, 2. Elevated serum IgG4 3. Positive histopathological examination. Patients were categorized into possible (1+2 present), probable (1+3 present) and definitive (presence of 1+2+3) IgG4RD.

Results

Two hundred and fifty-four patients were included; majority were males (59.4%). 208 (81.5%) were adults (mean age 42.5 ± 16.2 years), 46 (18.4%) were children (<18years) (mean age 12.7 ± 4.2 years). Median serum IgG4 was 661.5 mg/L (1072-310) and 896 mg/L (1420-485) in children and adults respectively. A total of 7 children (15.2%) and 104 adults (51.3%) had possible IgG4RD. Two adults had definitive IgG4RD. Frequent clinical manifestations in children were fever (85.7%), weight loss (42.9%), jaundice, and allergies (28.6% each) while in adults, weight loss (57.9%), arthralgia (39.3%), fever (32.7%), allergies (22.4%), and jaundice (18.7%) were noted. All the children and 71.02% of the adults had IgG4-related pancreatitis. Hepatobiliary involvement was seen in 14.93% of adults, 2.8 % had pancreatic malignancies, 1.86% had kidney involvement, 0.93% had vasculitis, sialadenitis, interstitial lung disease and retroperitoneal fibrosis each. 9.5% adults showed multiorgan involvement.

Conclusion

Of the total patients tested for IgG4, 45% had possible IgG4RD with pancreas being the most commonly affected organ.

Hypoparathyroidism

Abdul Saboor Saboor basirat
Amiri Medical Complex

Case report

Hypoparathyroidism is a life threatening condition occurs when insufficient parathyroid hormone is produced to maintain extracellular calcium level with in the normal range the acute clinical signs

and symptoms of hypoparathyroidism are the same as those of hypocalcemia, ranging from tingling to intractable generalized tonic clonic seizures; therefore, it can be mistaken for epilepsy. we are reporting a case of 25years old female patient which was a doctor by profession presented to Amiri Medical Complex on 15th may 2018 with 10 years history of tingling and burning of the hands and feet, spasm of the leg muscles ,fatigue ,generalized body weakness ,aches and seizures for the last 10 years .she visited multiple doctors and psychiatrist in last 10 years .the episodes of seizures were increase 2 years back so, she was labeled as an epilepsy and was started on valproic acid her seizures were little bit controlled (the numbers of episodes were decreased) but the rest of the symptoms were the same .no history of thyroid surgery ,no diarrhea no joint problems, no signs of other autoimmune conditions she had ASD which was repaired 2 years back in Pakistan .on examination

She had all signs of hypocalcemia. her serum calcium level was 4.14mg/dl (8.5-10.5), phosphorus 6.48u/l (2.5-4.5), PTH 9.03 pg/ml (10-69), TSH 1.71 uIU/ml (0.17-4.0), so diagnosed as a case of hypoparathyroidism. Patient started on calcium supplement and alfacalcidol now patient is free of symptoms no more seizures. we started tapering of antiepileptic treatment.

What are the barriers for improvement of mental health services in low-income and middle-income countries? A Systematic Review, 2017

Mohammad Ismail Zubair

Ministry of Public Health, Afghanistan

Introduction

A considerable part of global disease burden is counted for mental health related illnesses. Globally, 12 % of total diseases burden is of mental health disorders and the higher number of this is of young adults and population of reproductive age. There are substantial negative consequences of mental health problems on quality life. It also contributes to constant economic burden and low productivity of individuals, drug abuse, domestic violence, and extremism / terrorism, especially at LMICs. For improvement of provision of mental healthcare and strengthening the efficient use of limited resources, the first step is to recognize the barriers and then plan to tackle them

Objective

This systematic review is conducted to explore the barriers which stand on the way to improve the mental health services in LMICs.

Methods

I conducted a systematic search for published literature using the search terms “barriers AND mental health AND Low and middle income countries” and “mental health AND challenges AND low and middle income countries” on three databases, PubMed, Google Scholar and Science Direct (Elsevier). Only those records that were published in last fifteen years, in English language with their full texts available free of costs, were considered for inclusion in this review. In addition, for gray literature the WHO, World Bank and MoPH, Afghanistan websites were also searched.

Results

Twenty-two articles were eligible for inclusion in this systematic review. Nineteen studies were published in peer reviewed journals, while three very grey literatures. Almost all studies were conducted in either South Asia or Africa. The findings from various literatures on barriers to improving mental health services in LMICs in this review could be ordered in to four main themes. These themes are the priority agenda of public health and its funding implication, leadership and governance of mental health, human resources for mental health, and the organization of services.

Conclusion

This review suggests that strengthening advocacy for mental health, decentralization of resources, increment in mental health investment at primary care level, and improvement of community based awareness programs and community support will contribute to improve mental health services at LMICs.

Colonic pseudo-obstruction (Ogilvie syndrome); A case report

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Radiology Department, French Medical Institute for Mothers and Children

Objectives

The purpose of this study is to describe the clinical and imaging features of a potentially fatal condition leading to acute colonic distension without underlying mechanical obstruction.

Methods

An old patient with clinical history of nausea, vomiting, abdominal distension and constipation was referred to radiology department of French Medical Institute for Mothers and Children to undergo abdominal CT-scan.

Results

Abdomen CT-scan demonstrated significantly dilated colonic frame without detectable transitional zone to suggest mechanical obstruction. In addition, specks of air with free fluid was noted within the abdominal cavity representing bowel perforation which is a life threatening complication of the colonic pseudo-obstruction.

Conclusion

Colonic pseudo-obstruction is a potentially life threatening condition occurring in old patients and should be in clinical differential diagnosis in old individuals with clinical presentation of bowel obstruction. The fatal complication of this condition is bowel perforation which needs urgent surgical treatment.

Epidemiology of Brain Tumors in Neurosurgery Department of Aliabad Hospital, Kabul University of Medical Sciences.

Dr. Ahmad Fawad Pirzad

Aliabad Hospital, Kabul Afghanistan

Objective

To find prevalence of Brain Tumors among the admitted patients in Neurosurgery department. Our aim was to find out how many cases are admitted and operated during April 2013- April 2018? The male/female ratio? Age, residence and outcome of operation? What are the histopathology diagnosis?

Introduction

A brain tumor is an abnormal growth of tissue in the brain which are Primary and Secondary (metastatic) tumor. There are 2 types' brain tumors: Benign tumor. This kind of tumor is not cancer. It tends to grow slowly. Most benign brain tumors don't grow into nearby tissue. Once removed, they usually don't grow back. A benign tumor can cause symptoms . Malignant tumor. This kind of tumor is cancer. It usually grows fast, and grows into nearby tissue. This can make it hard to remove fully. A malignant brain tumor may grow back after treatment. Due to World Health Organization (WHO), Primary brain tumors are named by the type of brain tissue where origin from. The most common type of primary brain tumor is a Glioma. This type begins in the supportive (glial) tissue of the brain. Astrocytoma, Glioma. Ependymoma, Oligodendroglioma. Schwannoma. Meningioma. This kind of tumor starts in the outer linings of the brain (meninges).

Methods

We review retrospectively cases were admitted and diagnosed as Brain tumor and operated during April 2013- April 2018 (retrospective study) in Aliabad Hospital.

Our materials are patient's files, operation registration book and diagnostic documents. In this study we focused on: How many cases are admitted and operated during April 2013- April 2018? The male/female ratio? Neurological deficit? And Age, residence and outcome of operation? What are the histopathology diagnosis?

Results

There are 62 Brain Tumor operated during April 2013- April 2018. 29(46%) Male/33(54%) female, 16(25%) from Kabul and rest from provinces, 66% between 10-50 years old. 75% Meningioma.

Conclusion

this is one center study Brain tumors are common in Afghanistan residents, fortunately diagnosis and operation on brain tumors possible in Afghanistan and the outcome is satisfactory.

Uterine Vasculature Ligation for Management of Postpartum Hemorrhage Can Cause Uterine and Ovaries' Necrosis and Risk of Developing Postoperative Sepsis in a Woman A Case Report

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Introduction

Bilateral ligation of the uterine vessels (O'Leary stiche) to control postpartum hemorrhage (PPH) has become a first line procedure for controlling uterine bleeding in case of PPH.

Case report

A 30 year old woman G3P3-0-0-2 was presented to the triage room with chief complaint of abdominal pain, malaise, fever, dyspnoea, and diarrhea for last two days. She underwent Cesarean section five days back at one of the tertiary hospitals. During cesarean section she had massive hemorrhage due to which uterine vessels ligation were performed. At the time of presentation at FMIC, she was conscious, her BP was 130/85mmhg, temperature was 39°C, PR 130bpm, Respiratory rate 21 cycle per minute. By physical exam she looked pale, lungs were bilaterally clear to auscultation, heart was tachycardiac but regular rhythm, abdomen was distended, bowel sounds were audible, incision was clean, uterine size on fifth day of caesarean section was 31cm and tendered. In lab exams Hb was 5gr/dl, HCT-14.1, WBC -13000, CRP-34mg/dl. Ultrasound showed large uterus with hyperechoic shadowing material inside endometrial cavity. With diagnosis of post-operative infection and retained product of conception, she was admitted. Despite taking antibiotics, her condition didn't improve. She remained febrile and in spite of taking uterotonics her uterus didn't contract and its size remained the same. CT scan showed gossy fibroma. Finally, on fifth day of her hospitalization due to no improvement she underwent first evacuation and curettage for foreign body but just blood clots were removed. Then exploratory laparotomy was performed. Opening the abdomen massive adhesions were observed and after removal of some adhesions, it was found that the uterus was very big and necrotic with foul smell, both ovaries were gangrenous. It was evident that along with the ligation of the uterine and uteroovarian arteries the broad ligament was completely ligated from the base that caused disruption of blood supply to uterine and ovaries. Subtotal hysterectomy with both sides salpingo oophorectomy was performed and abdomen was irrigated with serum physiologic and then closed. After the operation she started to improve with the condition. She got afebrile, Lab exams were improved (CRP declined to 24 and WBC declined to 12000) and was discharged home on third day of post laparotomy with oral antibiotics. After one week she came for follow up with good condition.

Conclusion

This case confirms that for management of postpartum haemorrhage there are many surgical techniques so we emphasize on the importance of choosing appropriate surgical technique according to patient's condition which leads to the preservation of uterine vascularization. One of

the techniques that is less invasive and can be successful in controlling postpartum haemorrhage is uterine compression sutures. Another alternative is applying Bacri balloon to tamponade uterus.

A case report of lip hemangioma treated with sclerosing agent in FMIC

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Introduction

Hemangiomas are non-cancerous growths that is formed from abnormal collection of blood vessels in a tissue. Hemangiomas are the most common tumor of infancy accruing in the skin up to 4-10%.

The incidence is even higher in premature infants and they are common in white race than dark skinned population. Hemangioma have a unique growth characteristic and it has two cycles in the growth period which includes proliferative phase (rapid growth phase) and involuting phase (spontaneously slow regression phase). The objective of the study was to present a case report of lip hemangioma treated by sclerosant agent and insist on cosmetic points

Case report

A 5-year-old girl with a huge lower lip hemangioma which was gradually increased brought to French Medical Institute for Mothers and Children (FMIC) hospital. In initial physical examination, patient had a large lower lip hemangioma with bad appearance and patient was not able to close her mouth properly. Due to bad condition of patient, it was planned for sclerotherapy. The procedure was performed under general anesthesia and ethanol 99% was used for this purpose. Patient had swollen lip in the first week of post operation and on the first month of post operation, patient had reduction in the size of hemangioma and necrosis in the lower lip. After 5 months, patient underwent cosmetic surgery for correction of lip commissure and it was fixed.

Discussion

Many options are available for treatment of hemangioma including systemic corticosteroids, intralesional steroids, sclerosing agent therapy and surgery. The safest method with less complication was sclerosant injection therapy for this patient it had less complication and was more cosmetic.

Abstract submitted by: Dr. Freba Ahrar Soroush MD PGME, Chief of Pediatric Surgery Department, FMIC

Positive Psychology and Patients Well-Being

Kainat Asif Ali

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Purpose

This Paper Highlights the Impacts of Positive Psychology on Patient's Well-being. It also highlights the role of health care provider toward enhancing Positive Thinking in Mental Patients.

Method

This study is a literature review about the impacts of positive thinking on patient's recovery from mental disturbance. Seligman, a great psychologist, describe this term first time in 1998. Different studies were done to evaluate the effect of positive psychology in patient's recovery. Seligman applied the positive psychology at three different levels; Subjective level, Individual level and Community level. There are different approaches to find the impacts of positive thinking on these different levels. In order to be completely healthy, one need to be psychological healthy too. In order to keep someone mentally healthy, positive aspect of Life should also be highlighted. This is only possible if we can apply positive psychology and think in a positive manner. Secondly, this paper highlights the role of health care provider to enhance patient with mental disturbance to think in positive manner to increase their mental health. What are the different techniques nurses use to make it possible for the patient to only throw light on their positive side of life.

Conclusion

Complete Mental health can only be achieved if positive aspect of life should be highlighted. A patient gets mentally disturbed when he/she start thinking negative about him/her. In hospital setting Nurses are the one who can implement different techniques and find approaches to make mentally disturbed people think in a positive manner to enhance their recovery.

Hand Hygiene: An Interventional Study to Increase the Compliance in Secondary Hospitals

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Introduction

Health care associated infections(HAIs) are worrisome for patients and Health Care Leaders. The mainstay of these infections is the soiled hands of health care workers. Poor Hand Hygiene (HH) is an alarm that necessitates an immediate attention. The purpose of this study is to identify and mediate the factors leading to HH non-compliance and to evaluate the outcome in terms of compliance.

Methods

The study was conducted in March, 2017 at Aga Khan Secondary Hospitals (AKMCCC-Hyderabad, AKHW-Karimabad, AKHW-Garden, AKHW& C-Kharadar) which are units of Aga Khan University Hospitals. The study consisted of assessment, implementation and evaluation phases. The assessment was done using WHO HH self- assessment Framework 2010 that includes five components a) System Change b) Training and education c) Evaluation & Feedback d) Reminders

in Workplace e) Institutional Safety Climate for Hand Hygiene. This Framework determined the level of Hand Hygiene Practice and its Promotion in secondary hospitals.

Results

Each component was given the score out of 100. Hyderabad hospital rated 307.5/500, Kharadar hospital rated 232.5/500, Garden hospital rated 270/500 while Karimabad hospital rated 245/500. According to the interpretation of HH self -assessment framework 2010, Karimabad & Kharadar scored at Basic Level whereas Garden and Hyderabad achieved intermediate level of HH practices and promotion. The identified gaps that needed interventions included sanitizers' availability at point of care, training sessions for new inductees, online availability of Hand hygiene teaching material, leaflets and appreciation of staff as Hand Hygiene champions. All the identified factors were intervened throughout the year. Staffs were given pocket sanitizers, were appreciated as HH stars on quarterly basis, Infection control monitors were appointed to reinforce and monitor Hand hygiene practice in evening and night shifts. Reminders were spread to all hospital groups via email or message and posters were pasted for staff and patient awareness. The summative evaluation of HH compliance was done via WHO HH observation tool. The target was to achieve from 85%-90% in all four Secondary Hospitals by Q4, 2017. Hyderabad Hospital improved HH compliance from 74.3% to 90%, Garden Hospital 68.3% to 85%, Karimabad Hospital 79% to 85% and Kharadar Hospital 83% to 90% respectively.

Conclusion

Hand hygiene is the single most effective way of reducing HAIs. Therefore, comprehensive assessment and interventions as per framework should be done every three years to reach on advance level of compliance. Furthermore, it is recommended to develop an indicator that correlates HH compliance with HAI rates and consumption analysis of soap and sanitizer use should be taken as an indirect measure of Hand hygiene compliance.

Mentorship addresses the gaps correctly and timely through appropriate interventions

Marzia Naimi
JHPIEGO

Introduction

MoPH provided an equitable, fair and cost effective health services through Basic Package of Health Services and Essential Package of Hospital Services for the entire population in 2003. Despite of widely distribution of health services and a remarkable increase of SBA from 34% in 2010 to 51% in 2015 in Afghanistan, giving birth in a facility with SBA as exclusively institutional delivery is not enough to reduce maternal and newborn mortality and morbidity. Because, giving birth in a facility does not guarantee that an appropriate intervention implemented correctly and timely. In order to address the gaps in the process of care at facilities which can result in adverse obstetric and neonatal outcomes, and low demand for facility-based care, mentorship could provide a good opportunity to improve knowledge, skill and practice of SBA in the health facilities.

The objective of this paper is to describe the organization structure, processes, and result of Mentorship project, and its contribution to strengthening midwifery services in Afghanistan.

Methods

AMA provided mentorship program through 15 Team to 40 HFs, in two batches for a week at each HF in 5 provinces. AMA selected mentors in coordination with MoPH. When mentors received competency based training for two weeks, they settled in their target health facilities to provide technical assistance for midwives. Mentors by using an assessment tool extracted from HQIP assessed the HFs for some baseline information about mentees' knowledge, skills and attitude and work environment. Based on the collected information, mentors and mentees developed a plan for one-week mentorship program. Mentors were flexible for presence in the health facilities depend on availability of midwife and her readiness. The mentors left the health facilities after the implementation of the plan in a week.

Results

This program was initiated in 40 HFs in 5 provinces of Afghanistan. During the implementation, participating facilities improved performance in ANC performance from 52% to 87%, labor/delivery performance from 79% to 89%, complicated labor/delivery performance from 50% to 83%, PNC performance from 52% to 85% and SPS performance was from 50% to 90 %.

Conclusion

To date, the mentorship program has successfully supported 15 midwives to mentoring nearly 40 colleagues, strengthening the professional capacity of midwives in 5 provinces of Afghanistan, increasing acknowledgement of midwifery profession among health workers and acceptance among community members. Expansion of mentorship is a great way to Identify knowledge gaps or challenges, develop supportive and encouraging relationships, guide mentees in their professional, personal and interpersonal growth, act as a resource to facilitate personal and professional developments of others, promotes understanding factors that help mentees for their best practice and Socialization.

Methylmalonic Aciduria: Four Years' Experience of Etiological Classification & Outcome of Patients at A Tertiary Care Centre in Pakistan

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Objective

To determine the frequency of methylmalonic acidurias (MMAuria) diagnosed by urine organic acid (UOA) analysis due to methylmalonyl CoA mutase deficiency (MMA), intracellular Cobalamin (Cbl) defects, vitamin B12 (B12) deficiency and MMAurias associated with succinate-CoA ligase (SUCL) deficiency.

Methods

An observational study was conducted on patients presenting with MMAuria from Jan 2013-April 2016 at the Biochemical Genetic Lab, AKU Karachi, Pakistan. Demographic data, clinical manifestations, results of biochemical investigations were recorded and all UOA chromatograms were critically reviewed to exclude subjects with small peaks of MMA. Patients were stratified into five groups: (a) MMA; normal total homocysteine (tHcy), B12 and folic acid (FA), (b) Cbl defects; high tHcy, normal B12 & FA, (c) B12 deficient (B12 <200pg/ml) (d) SUCL deficiency; MMAuria, fumarate, succinate and malate on UOA. (e) Nonspecific MMAuria; tHcy, FA and B12 results not available.

Results

out of 1778 UOA analyzed, 50 subjects presented with MMAuria. After excluding subjects with small peaks of MMA, 40 were included in final analysis. Median age 11.5 months (IQR 6-41.5); 55% being female. (a) MMA (n=10), median age 11.5 months (IQR 5.8-15.5). Median methylmalonate was 582 Pseudounit (P.U) with (IQR 187-2777). Lethargy, hypotonia, hepatomegaly and metabolic acidosis were common features. (b) Cbl defects (n=11), median age 96 months (IQR 19-144). CblC was diagnosed in 3 patients based on molecular testing. Clinical features were developmental delay, mental retardation and seizures. Median tHcy levels were 124umol/l (IQR 50-225) and methylmalonate was 142P.U (IQR 66-258). (c) B12 deficiency (n=1) presented with hypotonia, lethargy, had B12 of 115pg/ml, tHcy 85umol/l and methylmalonate 143P.U. (d) SUCL deficiency (n=2); both were 8 months, had methylmalonate of 19.1P. U and 151P.U, fumarate of 370P.U and 500P.U respectively. Developmental delay and seizures were the clinical features. (e) Sixteen patients were classified as nonspecific MMAuria.

Conclusion

MMAuria is one of the common biochemical feature observed in the UOA analysis in our lab. Differentiation into the etiology of MMAuria is important for the correct diagnosis, treatment and outcome of the patients. Screening subjects by specialize tests like UOA and PAA, along with routine testing of tHcy, B12 and FA provide valuable clues to the presence of these underlying metabolic diseases.

Hypophosphatasia in Paediatric population: An experience from a tertiary care center of Pakistan

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Introduction

Hypophosphatasia is a rare inherited disorder characterized by defective bone and teeth mineralization, and deficiency of serum and bone alkaline phosphatase activity. The prevalence of severe forms of the disease has been estimated to be 1/100000 worldwide. Incidence of hypophosphatasia has not been calculated in Pakistani population till now. So we aim to

determine the frequency of Hypophosphatasia, based on low Alkaline phosphatase activity in pediatric population of Pakistan.

Methods

A cross-sectional analysis of results of serum Alkaline phosphatase of children (<18 years of age) acquired from January 2007 to December 2016 from AKUH data base system. The data were double checked by two data entry operators in EpiData (version 3.2) and data entry errors was removed. Duplication values like matched and mismatched was also checked by XLSTAT software. Then clean data then was converted into SPSS (version 21). Frequencies and percentages were calculated for all study categorical values. Quantitative variable was calculated in terms of mean and standard deviation i.e. age and alkaline phosphate. Cut off < 100 was taken for alkaline phosphatase to label Hypophosphatasia. To check the association of Alkaline phosphate with different parameter of the study. Finally, p-value set as 95% confidence interval.

Results

Total data was of 180,000 subjects out of which children < 18 years (n=21,886) were included in this retrospective study, amongst them hypophosphatasia was found to be 1% (n=1789) in age <5 years, 0.60 % (n=1152) in age group 5-10 years, 2% (n=3677) in age group 11-14 years and 8.3% (n=15268) in age group 15-17 years. Out of this 7.9% (n=14532) were female and 4.0% (n=7351) were male.

Conclusion

The frequency of hypophosphatasia in children < 18 years in Pakistani population is 12%.

Hyperoxaluria: An Experience from Clinical Laboratory of Tertiary Care Hospital of Pakistan

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Objective

To estimate the frequency of hyperoxaluria in samples coming for 24-hour urinary oxalate analysis at clinical lab of AKUH, Karachi.

Methods

Twenty-four-hour urine samples received, by the clinical laboratory of AKUH, from all over Pakistan from January 2012 to December 2016 were included in the study. Patients were provided with clear written instructions for 24-hour collection of urine. On the day of collection after discarding first void urine; collection was started till next morning first void. Volume of 24 hours was measured in liters at the sample receiving bench after mixing of the urinary sample a 6 ml aliquot was made with HCl added to avoid the precipitation of oxalate crystals. Specimens were stored at -20° C till analysis. Oxalate was quantified by oxalate oxidase enzymatic reaction on Microlab 300

using a kit from Trinity Biotech and two levels of quality control were run to validate the results. SPSS version 20 was used to analyze the data.

Results

In five years a total of 3594 patient's sample were received for twenty-four-hour urinary oxalate analysis. Mean age of the study group was 29.1 ± 0.2 years. Most of the samples were from males; $n = 2658$ (74%). Nine hundred and forty-five urine samples (26.3%) were from pediatric age group (<18 years) and two thousand six hundred and forty-nine (73.7%) belonged to adults (≥ 18 years). Kolmogorov-Smirnov test showed that oxalate data was skewed (p value < 0.001). Overall median twenty-four-hour urinary oxalate level was 14.4 (IQR 25-7.8 mg/24 hours). In pediatric age group median twenty-four-hour urinary oxalate level was 9.4 (IQR 20.2-4.5 mg/24 hours), where as in adults it was 16 (26.4-9 mg/24 hours).

Overall in pediatric group (<18 years) elevated oxalate levels were noted in 9.4% ($n = 81$). In infants (<1 year) high oxalate levels were 8.64% ($n = 07$), in 1-5 years old children was 7.73% ($n = 26$) and from in 5-18 year olds was 10.73% ($n = 45$). In adult's high oxalate was noted in 9.0% ($n = 248$) of the subjects.

Conclusion

We conclude that majority of the patients whose twenty-four-hour urine samples were considered for oxalate evaluations were adult males. In both age groups of patients, hyperoxaluria was observed in ~9% of patients. Higher levels of urinary oxalate substantially increase the risk of calcium oxalate kidney stones. Further prospective investigations of factors influencing urinary oxalate are needed.

Clinical characteristic and Immediate – outcome of children mechanically ventilated in Pediatric Intensive Care unit

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Introduction

mechanical ventilation (MV) is a new Technology with frequently usage and vital benefits for critical ill children of ICU in our country. In the past it was used limitedly in Operation Theater for specific purposes. For the first time FMIC started the art of advanced ICU practice and mechanical ventilation support of critical ill child in our country. Our objectives were assessment of indication and clinical characteristic of mechanically ventilated patient and their immediate outcome in PICU.

Method

retrospective cohort study of critical ill pediatric patients admitted in PICU of French medical institute for mother and children who required MV for more than 24- hours, over first quarter of 2018.

Results

PICU total admissions were 284 patient, 36(12.7)% patient received MV support > 48 hr. the median age was 2y, male was 19(56.7)% and female was 17(47.2)%. common indication for MV was neurological illness (41.6)% , followed by respiratory illness(27.7)% cardiac disease (8.3)%, and other reason for MV was(22.4)%. The median length for MV was 4 days. 8% developed complications most common atelectasis 5.5 % the long duration of MV was > 14 days, shock and MODS were identified as independent risk factors associated with increased mortality. The mortality rate of MV patient was 33.3%.

Conclusion

about 12.6% of PICU patient needed MV support for more than 48 hours, the neurological illness was the most common indication for MV and long duration of MV in this group were noted in our study.

Existing nutritional/ food practices carried out by pregnant women during antenatal period residing in Peri-urban setting of Karachi; an Exploratory study.

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Introduction

Adequate nutrition is essential at every stage of life to promote, maintain and recover health. Similarly, during pregnancy, good nutrition is vital for growth and development of fetus and mother's health. Malnutrition of mother during pregnancy results in offspring with low birth weight and high risk of prenatal mortality, abortion and premature delivery. Nutritional status of woman in Pakistan varies from province to province and within province from rural to urban setting. In Pakistan 14% women are undernourished (BMI <18.5), and 40 percent are overweight or obese (BMI ≥25.0). Micronutrient deficiencies were also found in women: Anemia 51.0%, iron deficiency anemia 37.0%, vitamin A deficiency 46.0%, zincs deficiency 47.6%, vitamin D deficiency 68.9%. Socioeconomic determinants of health are the circumstances in which a person born, nurture, survive, work and grow older and there are certain factors which affect quality nutrition of mothers and children.

Objectives

To explore existing nutritional/food practices carried out by pregnant women of Peri-urban settings of Karachi during antenatal period.

To assess predictors of anemia based on four indicators 1) Socioeconomic condition, 2) dietary and health behaviors, 3) knowledge attitudes and beliefs and 4) medical and obstetric history.

Methods

An exploratory study design with qualitative method of data collection will be used to explore predictor of anemia and food practices carried out during antenatal period. IDIs will be conducted among two groups of pregnant women 1) pregnant women who visited PHC Aga Khan University at Ibrahim hyderi and their HB is < 10.9, 2) pregnant women who visited PHC Aga Khan University at Ibrahim hyderi and their HB is >10.9.

Results

Expected findings will be number of pregnant mothers with low Hb visiting to PHC and their dietary intake habits, barriers and promoting factors influencing food-seeking behaviors during antenatal period.

Conclusion

The finding will provide an insight of the practices and barriers to quality nutrition to pregnant women, which will help in formulating and guiding policies that promote awareness and provide essential nutrition to these women in low resource settings.

Integration of Mental health to Lady Health Workers Programme in Pakistan

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Introduction

Research has shown that for depressive disorders, women account for 41.9% of cases as compared to 29.3% cases among men². In Pakistan prevalence of postpartum anxiety and depression is approximately 29%³. Antenatal care (ANC) has been significantly increased since 2005³. According to World Health Organization, approximately 80.5% of pregnant women worldwide, has one ANC visit from 2005-2012. It includes 71.8% women of low and middle income countries³. ANC provide a platform for pregnant women and their off-springs to access effective intervention and it help them to reduce risk associated with pregnancy and improve their health.

Primary Outcome: The primary outcome of this study is to reduce antepartum and postpartum depression and anxiety among pregnant women.

It will be achieved through following steps.

1. Increase mental health knowledge, Skills and performance of community health workers through supportive supervision who provide antenatal care.
2. Improved mental health knowledge of pregnant women through interaction with community health workers and supervisors.

Methods

Quasi experimental study design through qualitative and quantitative method of data collection will be used and this will be consist of three sequential phase. 1) Pre interventional phase, 2) Interventional phase and 3) Post interventional phase.

Pre-interventional Phase: Focus group discussions and IDIs will be conducted among community health workers to know basic knowledge and skills of community health workers related to mental health. Baseline cross sectional survey comprises of demographic information and household back ground and PHQ 9 will be administer among pregnant women to see prevalence of depression.

Interventional Phase: In this phase trainings and awareness will be conducted among community health workers about ANC and mental health and these CHWs will further transfer this knowledge to pregnant women through door to door ANC visits.

Post-interventional Phase: In this phase end line survey will be conducted to assess mental health of pregnant women and also identify barriers and facilitators for this program scale up.

Study population: Women of reproductive age of Ibrahim hyderi will be selected.

Brief plan of analysis: The quantitative data of baseline and end-line surveys will be analyzed through formulating frequencies by descriptive statistics on STATA version 10. Qualitative data will be analyzed using NVIVO.

Conclusion

This study will report prevalence of depression among pregnant women and it help to develop mental health awareness material which will be incorporated during ANC visit of community health workers.

Holistic approach is the only way to increase uptake of family planning services

Navita Mithani

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Objective

This paper indicates that uptake of family planning services can be enhanced and bring more successful and sustainable outcomes by focusing on and overcoming the rate of unmet needs for contraception by adding the holistic approach in interventions.

Informative material is available in different forms on family planning methods. One Married Women of Reproductive Age (MWRA) in four has unmet need for contraception, which is the highest rate in the region.

Methods

20 Family planning welfare centers (FWCs) were randomly selected to assess their quality of service delivery with the help of Standard based management and recognition (SBMR) performance standard assessment tool. In methodology six performance standards were measured which focused on the knowledge and skills regarding, infection prevention, short term family planning methods and intra uterine contraceptives devices (IUCD) insertion and removal techniques and resources availability and management.

Results

The results show that quality of services was not satisfactory before intervention, besides this accessibility and quality of services, other supply related issues, enabling environment, knowledge about Family planning and cultivate demand for services were compromised. Baseline assessment using SBM-R tool showed unexpectedly poor scores as low as 7%, which not safe for service delivery.

Conclusion

Holistic care is a comprehensive model of Caring. Holistic, client – centered approaches is the only way to make family planning programmes, effective and successful ultimately supports health care system.

Internal carotid artery free floating thrombus, rare cause of stroke in a young patient, case report

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Introduction

Internal carotid artery free floating thrombus is an uncommon entity causing acute stroke. The condition is characterized by a partially attached thrombus to the wall of artery moving downstream pushed by each heartbeat. In order to diagnose and manage the underlying disease various examinations have to be considered. Since atherosclerosis is uncommon in young adults, global coagulation test should be performed. In literature both surgical and medical approaches have been reported having similar successful outcome.

Objective

To present a rare cause of stroke in a young patient; Internal carotid artery free floating thrombus detected by Doppler ultrasonography

Method

Case report

Result/case presentation

A 23-year-old previously healthy man developed sudden right hand spasticity ensued by aphasia and hemiplegia. A non-enhanced brain revealed evidence of acute ischemic stroke in left fronto-temporal lobes. Doppler ultrasonography of the carotid arteries on the 4th day of clinical presentation, detected left internal carotid artery large free floating thrombus with almost 60% blockages of the vessel lumen. Echocardiogram, PT and PTT tests were normal. No other systemic cause was detected. The patient was prescribed anticoagulants and after one week follow up Doppler showed relative reduction in size of the thrombus.

Conclusion

Internal carotid artery free floating membrane is a rare cause of stroke in young patients which can be suspected in proper clinical setting and Doppler ultrasonography is the first modality for its evaluation.

Inherited Metabolic Diseases (IMDs) in the developing world: No time to lose

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Objective

To determine the frequency of organic acidurias (OA) and amino acidopathies (AA) in high-risk patients screened from 2013-2017 and review of literature on IMDs from Pakistan.

Methods

Five hundred and forty six patients' clinical data and chromatograms out of 12161 screened at Biochemical Genetics Laboratory from 2013-2017 were reviewed by a team of Chemical Pathologists. Screening includes analysis of organic acids (OA), succinylacetone (SA) and amino acids in urine and plasma amino acids. Review of published literature on IMDs from Pakistan of last 7 decades was also done.

Results

IMDs were reported in 546 cases (4.5%). OA were most common (57%) followed by AA (29%) and other IMDs (14%). Common OA were: methylmalonic aciduria (33.9%), multiple carboxylase deficiency (13.1%) and glutaric aciduria type 1 (7.7%). Frequent AA were maple syrup urine disease (28.3%), hyperphenylalaninemia (27%) and urea cycle disorders (17.6%).

Pakistani population is characterized by large family size and a high inbreeding with consanguinity rates ranging from 46-61% and hence expected high occurrence of IMDs. The literature from Pakistan on IMDs is growing at snail's pace prior to 2013 due to non-availability of diagnostic facilities. Small scale studies reported IMDs on specimens analyzed abroad. Handful of case reports (n~14) on IMDs were reported in 7 decades. Cases of primary hyperoxaluria (n=217) with documented clinical evidence, hepatic enzyme studies, or confirmed genetic analysis have also been reported from Pakistan. Fifty percent mortality and poor outcome have been described in patients with IMDs. Reports on challenges and ethical issues in diagnosing and managing IMDs in Pakistan also exist (n=2). Literature shows that Pakistan has higher disease prevalence of IMDs (4.7%) as compared to Singapore (3.5%), Japan (2.4%), and Malaysia (2%).

Conclusion

Our experience shows that the range of tests provided by BGL was helpful in diagnosing a wide range of IMDs. There is further need to improve diagnostics facilities and expertise. This data is valuable and endorses that although individually rare, IMDs are collectively common in Pakistan.

Relationship between childhood nutrition and premenstrual syndrome

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Objective

To test this hypothesis: There is a relationship between childhood nutrition and premenstrual syndrome.

Specific Objectives

- To develop a consent letter and get agreement and disagreement of the responders
- To make a questionnaire filled by high school girls
- To distribute the questionnaire within the high schools
- To compile the filled questionnaires from high schools
- To transfer the data to the ENA software
- To analyze the data and get the result
- To write the report

Methods

The research design selected was qualitative case study approach. Three methods were used for data collection. Initially a questionnaire and consent letter were developed and translated to Dari (Afghan language). Secondly, interviews are conducted with administration of female high schools. Thirdly, indirect interview by use of questionnaire was conducted with students of 11th and 12th classes in a private and a public high school in Kabul. Data was transferred to ENA software and analysis was done on excel sheet.

Results

Analysis show that most of the girls who are not suffering pain (75%) had been started breastfeeding within one hour after birth, and most of the girls who are suffering pain didn't started breastfeeding within one hour after birth and severity of the pain and other symptoms is combining with less percentage of starting breastfeeding within one hour after birth (little cramping 46%, unable normal activity and leave class 40%, severe pain and vomiting 20% and experiencing shock condition 33%). 100% of girls who experienced a shock condition didn't have a pure or exclusive breastfeeding.

The result come from all the collecting data and analysis of them approves the hypothesis. The girls who didn't experience premenstrual syndrome had better breast feeding background. Experience of painful menstruation is accompanied with bad practice of breast feeding and when the symptoms become severe the percentage of the bad practice (eating other thing instead of breast milk within 1st week after birth) become higher.

Conclusion

This retrospective qualitative research with case study design was developed for examining above hypothesis. The result come from all the collecting data and analysis of them approved the hypothesis.

Exploring gender and age distribution of TB cases among contacts in Afghanistan (2017): a data review

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Introduction

Investigation of contacts of patients with Tuberculosis (TB) is a priority for the TB control program of Afghanistan and is an active case finding strategy that has been proposed to increase case detection. Contacts of TB patients, in particular vulnerable people, including women and children, have a high risk of developing TB. However, there is no clear information about which and how many contacts within the at-risk groups develop TB. The aim of this review is to describe the age and gender distribution of TB cases found among TB index contacts.

Methods

The National Tuberculosis Program (NTP) with support from the USAID-funded Challenge TB (CTB) project collected data from 2017 for active contact screening in five Urban directly observed therapy, short course (Urban DOTS) provinces (Kabul, Herat, Kandahar, Jalalabad and Balkh). We reviewed data from door-to-door screening of TB index case contacts.

Results

In the door-to-door screening of contacts index TB cases, 5130 TB index cases were registered and 44617 household contacts were identified with an average of 8.7 contacts per index case. Out of these contacts, 6674 (15%) presumptive TB cases were identified and 602 (9%) all TB cases and 418 (6%) bacteriologically confirmed TB (BC-TB) case were diagnosed. There were 305 (73%) female and 113 (27%) male BC-TB among contacts. Based on age there were active TB in 0-14 years (32%), in 15-34 years (40%) and in 35-54 years (20%). Also, 368 (61%) female and 234 (39%) male were detected among contacts. (P=0.000002)

Conclusion

The TB case notification of children under 15 and females among contacts are higher than the WHO estimation. Contact investigation ensured access by children and women to quality services. Further investigation is suggested.

Exploring the effectiveness of survived TB patients at TB case finding in Afghanistan (2016-2017): Data review

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Introduction

Tuberculosis (TB) infection is one of the remarkable communicable diseases in urban, rural and hard to reach areas of Afghanistan. Because of crowd, high number of internally displaced people, returnees, poor hygiene, low nutrition level and poor ventilation, the TB transmission is still a big challenge. In the other hand, Public health facilities are away from those categories of people. However, there are 30% of TB cases are missed or undiagnosed in the country. The objective of this study is to clarify the role of survived TB patients at TB Cases finding in the community.

Methods

To support TB program, Challenge TB (CTB) project, established and oriented 150 groups of survived TB patients in 15 CTB supported provinces since November 2015. Each group included 10 TB patients whom success fully treated by health care workers. Based on their experience (sign and symptoms of TB) they provide health education at community level, encourage presumptive TB (P-TB) patients in their community and refer them to the nearest health facilities for screening. Sometimes they take up DOTS provision, thereby making them perform a vital role in combating TB.

Results

The Survived TB patient groups referred 732 Presumptive TB patients in 2016 and 986 presumptive TB patients in 2017. Among them 61(9%) in 2016 and 82 (9%) in 2017 diagnosed as Bacteriological confirmed TB. Also, 85(12%) in 2016 and 119(12%) in 2017 diagnosed all form of TB. However, the health care staff diagnosed 14931(5%) in 2016 and 11975(5%) in 2017 as BC-TB. on the other hand, they diagnosed all form of TB 25564(9%) in 2016 and 23271(9%) in 2017. (PV= 0.00001)

Conclusion

Survived TB patients contribution at bacteriological confirmed and all forms of TB are higher than health facilities staff. Further investigation required.

Effect of urban DOTS expansions in Kabul prisons on Tuberculosis treatment outcome

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Introduction

Before 2015, no complete TB services or reporting system existed in Kabul prisons, resulting in low case finding (40 all form TB cases in 2014) and a treatment success rate (TSR) of 80%. The NTP, with support from the USAID-funded Challenge TB project expanded the urban DOTS approach, which involves public and private health care providers in TB control efforts, to two main prisons in Kabul to address this gap.

Methods

After conducting a baseline assessment, and signing a memorandum of understanding with the in line ministries, the CTB project trained medical staff on TB case management, provided recording and reporting formats, and supervised, monitored and provided feedback to prison TB clinics. NTP and CTB teams reviewed data from 2015-2017 using the standard NTP reporting tool and compared the information with existing surveillance data.

Results

In 2015, 115 all form TB cases were registered in Kabul prisons, 102 were successfully treated (89%), four patients died (3%) and nine (7%) were not evaluated. In 2016, 209 all form TB cases were registered and 201 (96%) successfully treated, three patients (1%) died and four (2%) were not evaluated.

In 2015, of 5,449 TB cases registered in Kabul health facilities, 4,416 were successfully treated (TSR of 80%); 141 died (2.5%) and 510 (9%) were not evaluated. In 2016, of 6,108 all form TB cases diagnosed in public health facilities, 5,152 (84%) were successfully treated, 95 (1.5%) died and 450(7%) not evaluated.

Conclusion

Urban DOTS intervention in prisons made significant improvements to the TSR. Prison TB clinics may have a higher TSR because they might employ a better follow-up mechanism and enrolled TB patients are in a controlled area making it easier to access the patient and provide daily medication. We recommend engaging other prisons in TB services.

Sleep duration and factors associated among preschool children in Karachi, Pakistan

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Objectives

Sleep patterns, behaviors and problems are not well documented in the context of developing countries. The aim of this paper is to determine if the sleep duration during a single day is associated with bedtime routines, sleep environments, sleep problems, behavioral and emotional issues among preschool children.

Methods

A survey form was administered to 297 parents to collect sleep related information in two schools of Karachi, Pakistan. A multiple linear regression model provided information on significant predictors associated with total duration of sleep during 24 hours.

Results

The mean age of children was 4.6 ± 0.71 years, number of boys were 143 (48.1%). The average daily sleep duration (nocturnal + daytime nap) was 9.51 ± 1.21 hours, of which the mean night time duration was 8.15 ± 1.14 and mean daytime nap was 1.35 ± 1.04 hours. The final model was able to explain 46.3% variability for sleep duration (P value < 0.001). Parents' knowledge of sleep required for children ($\beta = 0.096$; P value 0.029), child clinging to an adult ($\beta = -0.123$; P value 0.004), and child having somatic symptoms ($\beta = -0.226$; P value 0.001) were found associated with outcome. The sleep habits found significantly associated included; child's wake up time ($\beta = 0.822$; P value <0.001), bedtime ($\beta = -0.656$; P value <0.001), taking nap ($\beta = 0.350$; P value <0.001) and sleep duration during weekend ($\beta = 0.119$; P value 0.001).

Conclusion

According to the study findings, at least 43.4% children had a sleep duration of less than 10 hrs. (Recommended hrs.) The study findings concluded monitoring of bedtimes, wakeup times and naps can improve sleep duration among preschool children. Other than that short duration of sleep is associated with behavioral problems, there is a dire need of raising awareness among parents for adequate sleep hours.

Role of active follow-up of child TB patients by phone on Tuberculosis treatment outcomes in Kabul city

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Introduction

In 2010, Kabul's population was 4,227,000, with 45% under 15. Management of tuberculosis (TB) among children was very poor because only two specialized hospitals had the capacity to provide TB services for children. Furthermore, treatment follow-up was poor and disorganized, resulting in a treatment success rate (TSR) of 23% for children. The aim of this study was to explore the contribution of active follow-up system using phones on treatment outcomes in Kabul city.

Methods

In early 2015, the Challenge TB (CTB) project introduced a phone tracking system to follow child TB patients who transferred out by health care staffs from specialized children's hospitals to other facilities for treatment follow up. CTB provided health facility staff with mobile phones and pre-paid monthly cards to enable them to contact patients under treatment and refer-in facilities. The

TSR reports were collected by phone with patients and in health facilities. The study team reviewed the treatment outcomes data from health facilities and NTP using TB recording and reporting forms.

Results

In 2010, 206 patients registered for treatment and 48 (23%) successfully treated, 19 (9%) died, 19 (9%) lost to follow-up, 6(3%) treatment failure and 114 (55%) not evaluated. In 2014, 1,059 TB patients registered and TSR was 425(40%), 8(1%) died, 41 (4%) lost to follow up, 56 (5%) treatment failure and 592 (56%) not evaluated. In 2016, 884 child TB cases were put on treatment and TSR 727 (82%), 6 (1%) died, 51(6%) were lost to follow-up, 39 (4%) treatment failure and 61 (7%) not evaluated.

Conclusion

The study revealed that using phone system to actively follow-up TB patients had role in TB treatment outcomes; there was significant improvement in TSR, lost-to-follow up and not evaluated cases.

Risk Factors Associated with Breast Cancer. An Audit of Proforma Filled Prior to Mammography in Tertiary Care Hospital

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Introduction

Worldwide breast cancer poses a major health risk for women. Being the most common cancer among female it is estimated that over 1.38 million women suffer from breast cancer according to the 2008 GLOBOCAN of WHO in Asia, Pakistan has the highest rate of breast cancer. Several researches and studies have been done to evaluate the causes and risk factors associated with breast cancer.

A risk factor is anything that affects your chance of getting a disease, such as cancer. Multiple risk factors have been found to be associated with breast cancer. Purpose of the study is to assess the association of breast malignancy with risk factors.

Methods

Retrospective data were used to investigate risk factors in patient during the period of January to September 2017. The data was analyzed by reviewing the mammogram screening form, ultrasound and biopsy reports of patients diagnosed with breast cancer. Patients included in this research have biopsy proven malignancy. Number of risk factors involved in this study are age, gender, family history, parity, menstrual history, previous treatment i.e. birth control pills or any kind of hormonal treatment. By analyzing the retrieved data, major and minor risk factors were appraised.

Results

100 patients were observed among which 24% were found normal, 46 have some benign findings 30% of the patients had malignant disease. The age ranges from 29-76 years with mean age calculated for malignant lesion is 40 and median age is 50 years. 96% of the females had children. Use of birth control pills was found negative in all. Two patients had history of hormonal treatment. 93.3% of the females have no family history of breast cancer.

Discussion

A study conducted on Iranian women reported that patients were mostly aged above 44 (Bidgoli et al., 2010). The average age breast cancer incidence among white females in the United States is 61 years (Jatoi and Anderson, 2010), while it is 51.4 years in Pakistani females according to our study. It is almost a decade earlier, as compared to other parts of the world specially the Western countries

Conclusion

Our local data in this limited series shows relative younger age group of patient than western countries with negative family history in 93% of patients. This short audits conclude that screening should start earlier in our country disregarding the family history for breast cancer.