WORKLOAD MEASUREMENT IN GOVERNMENTAL PRIMARY HEALTH CARE LABORATORIES IN GAZA STRIP

REEM SHOMER, YEHIA ABED

College of Medicine Conference (CMC I)
Medical Education and Public health

A realistic and accurate assessment of laboratory workload is necessary for effective laboratory management. Workload, the sum of the work achieved or to be achieved, is obtained by multiplying the raw count of each individual procedure by its unit value expressed in units (minutes). For many years, there had been dissatisfaction with the existing method of assessing workload since it doesn't reflect the complexity which varies from test to test.

Objectives: To develop workload measurement and once developed, it will serve as a management tool especially for decisions regarding staffing level and distribution. Other objectives of the study were to determine employees' perception about their workload and working environment.

Methodology: A cross sectional study about workload measurement was carried out in the governmental primary health care medical laboratories in Gaze Strip. The study included all the eighty four employees who had technical responsibilities at the time of the study. Data had been collected using a self-administered employee questionnaire to get information about employee's perception, an observational checklist to get information about staff and working environment, an extraction sheet to record the observed time for laboratory test performed at the PHC laboratories obtained through the conduction of time study by well trained medical technologists, and an interview with the director of laboratories & blood banks directorate to gain more in-depth information.

Results: The research findings indicate that PHC laboratories do not have workload measurement standard and that staff distribution is not based on the number of tests performed by each laboratory. Further more employee's knowledge about workload measurement tends to be low.

In this research 66% of employees believed that over-workload exists in PHC laboratories and they attribute their feeling of being overloaded to factors such as inadequacy of staff, increasing work intensity, increasing paperwork, frequent equipment failure and absence of clear job description. Regarding staffing decisions, 45% of employees have negative perception regarding staffing decisions in the sense of being fair, transparent and objective. Also 45% of the employees have a negative perception about their working environment which may be attributed to improper working conditions such as unavailability of sufficient working area in 62.5% of laboratories. In addition 55% of employees were dissatisfied of the service provided by the maintenance department since 50% of the laboratories have at least one disrupted instrument.

Finally the research presented the results of unit values per test achieved though the conduction of time studies. An examples were the unit values for Hb, CBC, WBCs, ESR, and Blood grouping & Rh which were 3.5, 2.7, 6.0, 3.3, and 4.1 minutes respectively. Also for Glucose, Urea, Creatinine, Uric Acid, Cholesterol, and Triglycerides the results for unit values were 6.3, 7.9, 8.1, 6.6, 6.5, and 6.5 minutes respectively.

Conclusion: The researcher recommends utilization of workload unit values determined by the researcher through the conduction of time study to develop workload measurement system in the governmental medical PHC laboratories. More involvement of the staff in decision making and improvement of both working environment and management of instruments are also recommended.

SEVERE OSTEOGENESIS IMPERFECTA

NABIL ALBARQOUNI

College of Medicine Conference (CMC I)
Medical Education and Public health

Severe osteogenesis imperfecta (OI) is a hereditary disorder characterized by increased bone fragility and progressive bone deformity.

It is a retrospective study which includes 10 severely affected OI patients, 9 patients under 2.5 years of age (3 boys & 6 girls) and girl 12 years old in EGH for the last 5 years.

Objectives

To determine prevalence and incidence of Osteogenesis Imperfecta in EGH. Also to know that Consanguinity will affect the outcome married relatives.

Introduction

OSTEOGENESIS IMPERFECTA (OI) is a heritable disorder characterized by increased bone fragility. Four discrete types are commonly distinguished on the basis of clinical and genetic features. Type I OI comprises patients with mild presentation and normal height, whereas type II OI is lethal in the perinatal period. Type III OI is the most severe form in children surviving the neonatal period.

These patients have a well defined phenotype, including extremely short stature, growth plate abnormalities, and progressive limb and spine deformities secondary to multiple fractures. Patients with a moderate to severe phenotype who do not fit into one of the above categories are classified as type IV OI.

In many, but not all, OI patients, mutations of the genes coding for procollagen type I chains are identifiable.

Subjects and Methods

There are 8 patients delivered in our hospital, two were antenatally diagnosed as congenital skeletal abnormalities, other 6 babies postnatally diagnosed.

Most of eight children with severe OI type II lethal and they expired after birth except one alive up to 8 months then died with chest infection, one boy 2.5 years old still alive O.I. II admitted recently. One girl patient was diagnosed as type III OI, still alive now 12 years old, short with multiple limbs fractures.

There are 9 patients with the same family; Only one girl alive with another family, another boy 2.5 years old still alive. Most of them died after birth immediately within few hours.

One girl diagnosed antenatally due to previous baby with O.I. and admitted several times with chest infections, till 8 months old then expired.

Conclusion

Prevalence and incidence of O.I. is high in our area due to Consanguinity.

Genetic study must be done to most of families with O.I. because our patients with same family except one.

Genetic counseling

Offer genetic counseling to the parents of a child with OI who plan to have subsequent children.

During genetic counseling, the possibility that the parents may harbor new mutations, such as asymptomatic somatic and germ line mosaicism, need to be discussed.

SPONTANEOUS INFRARENAL ABDOMINAL AORTIC DISSECTION PRESENTING AS RIGHT LEG CLAUDICATION

MOHAMMED HABIB, IAD SAAFIN, WAHEED ABO GALI

College of Medicine Conference (CMC I)
Medical Education and Public health

Spontaneous infrarenal abdominal aortic dissection (SIAAD) is rare. Patients with SIAAD may be asymptomatic or may present with abdominal pain or lower extremity ischemia. We describe a case report of a patient with SIAAD who presented with claudication in right leg.

A 43-year-old male patient presentes with right leg claudication since 2 months. The patient's medical history included chronic hypertension and he smoked a pack of cigarettes a day.
Blood pressure: 160/90 mmHg. Heart rate: 82 beats/min./regular. Normal heart sounds, no rubs, no murmur, normal carotid pulse without bruits. Right femoral, popliteal, dorsalis pedis and posterior tibial artery are week (1+). Left femoral, popliteal, dorsalis pedis and posterior tibial artery are normal (2+).
Therefore the patient undergoing diagnostic arteriography from right femoral artery but guidewire does not across above common iliac artery, so that we inserted sheath from right brachial artery and injected dye above aortic bifurcuation . We see abdominal aortic dissection with normal abdominal aortic diameter and intimal tear is in infrarenal. (Figure 1).

The falp compressed the ostial right common iliac artery with good collateral arteries from abdominal aorta to distal right common iliac artery(figure 2)

Figure 1: Abdominal aortic dissection with normal abdominal aortic diameter and intimal tear is in infrarenal.

Figure 2: Good collateral arteries from abdominal aorta to distal right common iliac artery

INFANTS FEEDING IN GAZA STRIP: MOTHER'S KNOWLEDGE, ATTITUDES & PRACTICES

BASIL KANOA, MOAIN KARIRI

College of Medicine Conference (CMC I)
Medical Education and Public health

INTRODUCTION

Breast milk is a living substance, unique and non-replaceable and specially tailored to the changing needs of each baby. Breast milk protects babies against viruses, bacteria and parasites. Several bioactive factors in human milk act as barrier to various serious diseases in addition to their action to stimulate and strengthen the development of the baby's immature immune system.

It is important to mention that health care professionals have a great influence on mother's attitudes and decisions regarding infant feeding, therefore "Baby Friendly" status is needed to achieve where health care professionals work in an atmosphere of professional sincerity promoting and supporting breastfeeding away from any commercial pressure. The knowledge and skills of health professionals in lactation management is needed to be upgraded as well. We must go a step forward and strive to make the society and homes to be "baby-friendly" as well. Ministry of Health in Palestine have been taking many steps in promoting breastfeeding such as adoption of the national strategy for infant and young children, celebration with the national BF week and emphasis on implementing International Code of Marketing of Beast milk Substitutes and formulating Breastfeeding Coordination Committees to oversee the implementation of the Strategy for infants and young child feeding.

AIM

The aim of this study is to assess the level of mother knowledge, attitudes and the practices in regard to Breastfeeding in Gaza Strip.

Methodology and Study design

This is a cross sectional study targeting 268 lactating mothers selected through three localities in the Gaza strip on a non probability sampling technique.

The data was collected through a well established questionnaire. More than 10 female health educators worked on data collection as volunteers after a short training.

Main study results

1. Prevalence of exclusive breastfeeding: 38%.
2. 100% of the mothers know at least one advantage.
3. 31% of the mothers introduce artificial milk when their babies are sick.
4. Almost 75% mentioned that their babies are satisfied with breastfeeding.
5. Still 38% of the mothers think that artificial milk has advantages.
6. 13% of the lactating mothers throw the colostrums and didn't give them to their children.
7. Still there are 7% of the mothers give a solid food within the first month of life.
8. Rooming in policy is still highly adopted of more than 86%.
9. More than 58% receive advised for immediately breastfeeding.
10. A strong relationship was seen between the level of children satisfaction and the duration of Breast feeding.
11. The level of satisfaction is strongly affected by the scheduling of the feeding time.
12. Breast feeding was strongly affected-negatively with the mother working outside home.

Conclusion:

This study revealed seriously the need for the implementation of the national strategy for infant and young children feeding. The level of mother knowledge in regard to BF doesn't guarantee the fully implementation of BF for this a need for further training to health care providers on the infant feeding strategies and more ministerial commitments toward the implementation of BF strategies is needed.

IMPACT OF FOOD HANDLING AND PRACTICES ON FOOD SAFETY AND QUALITY AT THREE GOVERNMENTAL HOSPITALS IN GAZA STRIP

FOUAD EL JAMASSI, ABEDEL RAZEK SALAMA, YOUSEF ABU SAFIEH

College of Medicine Conference (CMC I)
Medical Education and Public health

A cross sectional description study has been implemented to investigate the "Impact of Food Handling and Practices on Food Safety and Quality at Three Governmental Hospitals in the Gaza Strip, Palestine". The main objectives of the study are:

(1) To determine the types and characteristics of bacteria in food during preparation and handling the food.

(2) To assess foodhandlers general health and hygienic practices

The results of the laboratory investigations of the food show that, all the laboratory results of the food were within the accepted food microbiological standards. The impact of the foodhandlers appears clearly when the microbial contents of some food stuffs were high without causing food poisoning to the consumers of this food, whether they were patients or medical staff. The food was tested for total bacterial count, Coliform bacteria, Staphylococcus aureus, Salmonella, Moulds and Yeast, all tested food was negative for Salmonella and Moulds. Only in one day S. aureus was detected in elevated count where the microorganism did not start to release the enterotoxin, which might cause food poisoning. Presence of Coliform in the cooked food means insufficient cooking. The laboratory investigation of the

foodhandlers health and hygiene show that all of them are chest X-ray free, one has Hepatitis B positive, two have E. histolytica In their stool, but the stool cultures for Salmonella and Shigella were negative. Three foodhandlers have pathogenic bacteria in their throats culture, 2.5 % of them have E. coli. 2.5 % have S. aureus. And 2.5 % have Klebsiella in their throats. Five microorganisms were found in the hands, Klebsiella represents 5%, Enterobacter about 7.5 %, E. coli about 2.5 %, Pseudmonas about 2.5 %, and S. aureus was 7.5 %.

Implemented recommendations have been drawn from this study including the following:

(1) Prohibition of delivery of more than one food by the same food box or tray.

(2) To design and implement HACCP (Hazards Analytical Critical Control Point) system in the Governmental Hospital Kitchens.

(3 More females and well training with high education level must be added to the employee's power especially in the kitchen.

(4) To conduct similar studies in other places, like NGO's hospitals restaurants and hotels.

(5) To conduct other studies at hospitals in the North Provinces in order to conduct a national studies for this important issues.

BIOCHEMICAL CHANGES ASSOCIATED WITH NUTRITIONAL RICKETS AND ITS RELATION TO RISK FACTORS AMONG CHILDREN IN GAZA STRIP

MAGED M. YASSIN, RUBA F. MUSHTAHA

College of Medicine Conference (CMC I)
Medical Education and Public health

The current study was carried out to investigate the biochemical changes associated with rickets and to assess the relationship between vitamin D and rickets risk factors. The study population comprised 87 ricketic children (< 36 months) taken from Al-Shatea clinic (a referral health facility catering for children from Gaza Strip for rickets) and 80 healthy control children matched with cases for sex, age, locality and socioeconomic standards. Data were obtained through questionnaire interviews held with children's parents and from blood analysis. The mean level of serum vitamin D in rachitic children (17.4±14.0) was significantly lower than that in controls (56.1±19.5).

In general, there were significant differences in the mean levels of other biochemical parameters between control and cases, respectively as follows: calcium 9.4±0.6, 9.5±1.3; phosphorus 6.8±1.5, 3.9±1.2; alkaline phosphatase169.0±63.4, 1233.4±831.8; parathormone 48.1±18.7, 329.2±275.1; hemoglobin 10.8±0.5, 10.4±1.1 and cholesterol 161.0±34.8, 131.7±24.6. Analysis of the relationship between serum vitamin D and rickets risk factors showed lower vitamin D levels among children who had prolonged breastfeeding with less formulated food rich in vitamin D. Lower vitamin D levels were also found with increasing number of deliveries and lacking of sunlight exposure. The study provides hints for implementing strategies that could contribute in prevention of rickets in the Gaza Strip.

DETECTION OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS IN NOSOCOMIAL INFECTIONS IN GAZA STRIP

NIDDAL HUJAYER

College of Medicine Conference (CMC I)
Medical Education and Public health

Although Staphylococcus aureus is a member of the normal human microbiota (flora), it may cause fatal infections to humans who underwent accidental injury or surgical operation. The bacterium is potent in acquiring antibiotic resistance, and is now a very important causative agent of hospital acquired infections.

In Gaza Strip hospitals, as in other parts of the world, methicillin resistant S. aureus (MRSA) is considered one of the most important causative agents of nosocomial infections, so the present study aimed broadly to obtain a snapshot of MRSA prevalence in Gaza Strip, a part of the world not previously surveyed for this type of resistance, as well as the antibiotic resistance pattern of these isolates.

A total of 150 clinical isolates of S. aureus were identified from different patients.

Disk diffusion tests, CHROMagar MRSA medium, and the PCR assay technique were performed for each of the 150 isolates to identify MRSA strains. The prevalence of methicillin resistance. among S. aureus isolates was 22% (33 isolates), which can be considered a low percentage compared to that in neighboring countries.

Detection of MRSA in hospital laboratories highlights the epidemiology of MRSA, and decreases the creation of more resistant strains that may result from random empirical treatment through the use of unnecessary wide spectrum antibiotics.

The results of this study show that using methicillin conventional disk diffusion test for detection of MRSA in hospital laboratories is highly reliable and it can reach the same value of specificity and sensitivity of the PCR assay.

PREVALENCE OF CAMPYLOBACTER, SALMONELLA AND E. COLI O157:H7 IN LOCALLY SLAUGHTERED FRESH POULTRY (BOTH TURKEY AND CHICKEN) IN GAZA STRIP

ABDELRAZIQ SALAMA

College of Medicine Conference (CMC I)
Medical Education and Public health

In this study, the prevalence of Campylobacter, Salmonella and E. coli O157:H7 in locally slaughtered fresh poultry (both turkey and chicken) in Gaza Strip was investigated during a period of nine months, from June 2003 until February 2004. A total of 400 fresh poultry samples, 200 of each product (turkey and chicken) were collected from five governorates of Gaza Strip (Rafah, KhanYounis, Mid Zone, Gaza City and North Gaza). From each governorate, fourty samples of each turkey or chicken parts [wings, legs, breasts and giblets (livers and hearts)] were examined for their bacteriological quality in terms of : aerobic plate count (APC), total coliform (TC), fecal coliform (FC) and Staphylococcus aureus, as well as the presence of Escherichia coli O157:H7, Salmonella and Campylobacter.

The incidence of Campylobacter, Salmonella and Escherichia coli O157:H7 were 10.0%, 13.0% and 2.5% in poultry samples respectively (13.5, 11.0 and 3.5% in the chicken samples and 6.5, 15 and 1.5% in turkey samples, respectively). Results indicated that turkey samples were more contaminated with Salmonella than chicken samples, but less with Campylobacter and Escherichia coli O157:H7.

Results indicated that there were no significant differences in the prevalence of Campylobacter, Salmonella and Escherichia coli O157:H7 in turkey samples between the governorates of Gaza Strip, but in chicken samples, there were significant differences in the prevalence of Salmonella only and the higher percentage was in KhanYounis (27.5%).

On the other hand there were no significant differences in the prevalence of E. coli O157:H7 between turkey parts but for Salmonella, the breast (26.0%) and giblet (18.0%) samples had the highest percentages. And for Campylobacter, the highest percentages were in wing (14.0%) and leg (12.0%) samples of turkey. Relatively the same results were obtained with chicken parts; there were no significant differences in the prevalence of E. coli O157:H7 between chicken parts but for Salmonella, the breast samples (24.0%) had the highest percentage and for Campylobacter, the highest percentages were found in wings (26.0%), followed by legs (22.0%) of chicken samples. There were no significant relationships between the prevalence of Campylobacter, Salmonella and E. coli O157:H7 in poultry.

EVALUATION OF CURRENT SCREENING TEST FOR ASYMPTOMATIC BACTERIURIA DURING PREGNANCY AT FIRST ANTENATAL VISIT IN RIMAL HEALTH CENTER UNRWA, GAZA 2007

RASMIYA GHSOUB, YEHIA ABED

College of Medicine Conference (CMC I)
Medical Education and Public health

Urinary tract infection is a common problem during pregnancy and if it is not diagnosed and treated properly and subsequently bad sequels could occur affecting the mothers and their outcome of pregnancy.

Objectives: *The main objective of this study is to determine the prevalence of urinary tract infection (UTI) and asymptomatic bacteriuria (ASB) during pregnancy, as well as evaluation of the validity of current screening test (nitrite dipstick) at first antenatal visit.*

Methodology: *This is a cross sectional study conducted among pregnant women in Rimal Health Center which is a Primary Health Care center; UNRWA in Gaza City. The study population totals 160 pregnant women attending antenatal care at first antenatal visit from 12th April 2007 to 25th July 2007. Midstream urine was collected and tested with culture, dipstick and microscopic examinations. Validity of tests was measured by sensitivity, specificity, positive predictive value and negative predictive value. Antibiotic sensitivity was also done.*

Results: *Thirty one out of 160 women were identified positive urine culture with prevalence of 19.4%, 18/160 was asymptomatic (11.25%) while 13/160 was symptomatic (8.15%). Among the 31 culture positive, the commonest organism was staphylococcus aureus (29%), followed by E-coli (25.80%) and klebsiella (22.58%).*

Ciprofloxacine was shown as the 1st sensitive drug in all cultures (93.54%) followed by cefuroxime (83.87%) and co-amoxiclave and norfloxacine were equal (70.96%) while amoxicillin, co-trimoxazol and erythromycine had the lowest sensitivity. Maximum resistance was seen to co-trimoxazol (67.74%) followed by doxycycline (29.03%). ,

History of diabetes mellitus either during current pregnancy or in the past, symptoms of UTI, weeks of gestation and the previous history of premature deliveries were statistically significant risk factors for the occurrence of ASB. Age, gravidity, parity, educational level, previous CS, history of urinary catheterization and previous history of UTI were not significant risk factors for the disease. Nitrite dipstick had low sensitivity (29%), high specificity (97.7%), with positive predictive value of 75% (PPV) and negative predictive value of 85% (NPV).

Conclusion: *Asymptomatic bacteriuria in pregnancy is a major public health problem and nitrite dipstick reagent is not sufficiently sensitive to be of use in screening of asymptomatic bacteriuria in pregnancy and many of patients would be missed for management. So, the researcher recommends the use of urine culture for screening of pregnant women at first antenatal visit.*

HFE GENE MUTATIONS AMONG B-THALASSEMIA INTERMEDIATE AND B -THALASSEMIA MINOR INDIVIDUALS IN GAZA STRIP

ZAYED M. HARARA

College of Medicine Conference (CMC I)
Medical Education and Public health

Hereditary hemochromatosis (HH) is an autosomal recessive disorder of iron metabolism caused by mutations in the HFE gene.

The aim of this study was to determine the occurrence of C282Y and H63D mutations among β–thalassemia intermediate and β–thalassemia minor subjects residing in Gaza Strip. The study population consisted of (25) thalassemics intermediate who do not depend on regular blood transfusion, (30) thalassemia minors and (30) normal persons as the control group. The presence of mutations was determined using PCR-RFLP technique on genomic DNA extracted from blood specimens.

The results indicated that none of the control subjects showed HH due to C282Y or H63D mutation. Results of the thalassemia intermediate group showed that 7 (23%) are heterozygous, and that 2 (7%) of them are homozygous for H63D. Thalassemia minor group results showed that 5 (20%) of them are heterozygous, and that 3 (12%) are homozygous for H63D mutation. The C282Y mutation was not recorded in any of the subjects. This study recommends that all thalassemics " major and intermediate" and thalassemia minor should be screened for HFE gene mutations

Key World:

Hereditary hemochromatosis (HH), β–thalassemia, PCR- RFLP and Gaza Strip

RISK FACTORS ASSOCIATED WITH HELICOBACTER PYLORI INFECTION IN GAZA, PALESTINE

ABDELRAOUF ELMANAMA, MOFEED MOKHALLALATI, RANA ABU-MUGESIEB

College of Medicine Conference (CMC I)
Medical Education and Public health

Helicobacter pylori (H. pylori) infection is usually acquired in early childhood. H. pylori infection is associated with several upper gastrointestinal disorders. Local data on the epidemiology of the infection are scarce in Palestine. The purpose of this study is to measure the rate and to explore the associated factors among the population living in Gaza strip. This study included 89 randomly selected participants from non-hospitalized patients. Age, sex, socioeconomic status and other potential risk factors were assessed using a structured interview. Ultra Rapid Urease Test was performed on biopsy specimens followed by histology examined with Methylene blue stain, HpSAg test to detect antigen in stool specimen and Hp IgM antibody was measured in blood using ELISA technique. Age ranged between 13-77 years, with mean age 37.03, (37.1%) were females and (62.9%) were males. The pylori infection was (48.3%). There were variations between the different tests. There was a significant correlation between the type of drinking water consumed during childhood and H. pylori infection. H. pylori infection showed no significant correlation with age, sex, weight, marital status, smoking, education level, coffee drinking, oral hygiene, socioeconomic status including number of persons living in the accommodation, number of persons in each room, income, type of accommodation, consumption of drugs and antibiotics. Tea drinking proved to be a protective factor against H. pylori infection.

Keywords: H. pylori, URUT, HpSAg, ELISA, Biopsy specimen, Gaza, risk factors