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Theme:

**Generating Research Evidence
in a Digitalised Healthcare Delivery System**

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EDITORIAL

This special edition of Korle Bu Bulletin focuses on submissions for the maiden edition of KBTH Research Day and jointly serves as the abstract book for the celebration. Consequently, it does present readers with snapshots of a variety of studies as well as showcases the theme of the programme.

The innovative creation of research evidence will inform the improved practice that will delight patrons of the Hospital in the midst of growing healthcare competitions. Consequently, we will continue to foster and support collaborative engagement to accelerate new discoveries that will catapult our competitive edge.

Digitalising our Hospital systems is an obvious game-changer that would benefit from evidence-based strategies that are tailored to ensure comprehensive solutions.

It is our hope that readers will find the collection of articles in this Research Day special edition of the bulletin very intriguing, contemplative and motivational and look forward to more contributions for future editions.



Dr Franklin Acheampong
Head of Research

Digitalising Healthcare Delivery as an Enhanced Competitive Tool



Dr Daniel Asare
CEO

It is obvious that the evolution in digitalisation of healthcare has now reached escape velocity and there is no doubt that the Hospital can harness such potential. Digitalising patient records in Korle Bu is a crucial step in her business' advancement into the modern age necessitated by unavoidable emerging threats and opportunities.

Storing manual patient charts have become cumbersome and difficult to offer effective continuous care to the detriment of our cherished patients.

The impending system will streamline clinical workflow when rolled-out and the Hospital will tap on to improvement by capturing structured healthcare information which will support monitoring and managing Korle Bu's performance.

Invariably, it will be aimed at providing a conducive environment that could benefit all aspects of hospital operations such as clinical, administrative and financial systems.

A CHART REVIEW OF DIABETES CARE AT THE KBTH POLYCLINIC/FAMILY MEDICINE DEPARTMENT

Authors: Lamptey R, Acheampong F

Introduction: Diabetes has been among the leading cause of mortality and morbidity in the Korle Bu Polyclinic/Family Medicine department for the past decade. The polyclinic provides primary care diabetes services as part of the general OPD services as well as in a weekly dedicated clinic. The abstract is a review of data collected from the dedicated clinic.

Methods: We conducted a review of data on clinic attendance as per the OPD attendance register.

Analysis The data was entered into SPSS, cleaned and analysed. The data are presented using descriptive statistics.

Results: Records were available for 743

patients. The female to male ratio was 2.6:1. Majority (95.1) of the patients assess the services using the NHIS. The mean age of patients assessing care in the dedicated clinic was 57.7 ± 13.7 with the youngest person aged 15 yrs and the oldest 97yrs. The population tended to be poorly controlled with mean FBG of 9.2 mmol/l and median RBS of 9.55 mol/l and mean HBA1c of 8%

Conclusion: With the introduction of electronic medical records at the polyclinic, it is important to collect more comprehensive and accurate data in-order to audit diabetes care services in the polyclinic. The finding of HBA1c of 8% is comparable to our previous studies in the polyclinic a decade ago which found a mean HBA1c of $8.7 \pm 2.7\%$ ¹

PREVALENCE OF CONGENITAL HEART DISEASE IN NEWBORNS DELIVERED IN THE MATERNITY BLOCK OF KORLE BU TEACHING HOSPITAL, ACCRA, WEST AFRICA.

Frank Owus-Sekyere, Nana-Akyaa Yao, Bamenla Goka, Alfred Yawson, Della Adzosii, William Obeng, Justice Aheto

SUMMARY

Objective: The study sought to determine the prevalence and types of congenital heart disease in newborns delivered at the maternity block of Korle Bu Teaching Hospital, Accra using a set of clinical physical examination parameters.

Design: Hospital-based cross-sectional study with a comparison group component involving all newborn deliveries ≥ 34 weeks' gestation at Korle Bu Teaching Hospital (KBTH).

Participant: One thousand six hundred and thirteen newborns aged 1-14 days were recruited into the study. There was a slight male preponderance of 50.4%.

Method: Each newborn was examined using a set of clinical examination parameters for the

presence of congenital heart disease. Those with suggestive features were subjected to a confirmatory echocardiogram test. A comparison group

Results: Fifty-two newborns had features suggestive of CHD out of which 19 were proven on echocardiogram to have congenital heart disease. This makes a prevalence of 11.8 per 1000 live births. The most common acyanotic CHD found was Isolated ASD followed by PDA, VSD and pulmonary artery abnormalities in decreasing frequency. The only cyanotic CHD found was a case of tricuspid atresia.

Conclusion: The prevalence of congenital heart disease in newborns mirrors worldwide prevalence and clinical examination at birth is effective at picking up CHD in newborns.

INCIDENCE OF SEVERE ODONTOGENIC INFECTIONS; A 5-YEAR REVIEW OF A MAJOR REFERRAL HOSPITAL IN GHANA

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Introduction:

Odontogenic infections are fairly common in healthcare settings. However, late presentations such as Ludwig's angina, facial cellulitis, necrotizing cervical fasciitis (NCF), among others could lead to mortality.

In view of suggestions that the occurrence of severe, near-fatal odontogenic infections is declining, this study set out to determine the incidence of such severe odontogenic infections over the past 5 years at the Korle Bu Teaching Hospital, a major referral centre in Ghana.

Method: A retrospective review was done, involving all patients with severe odontogenic infection, thereby requiring admission, per stated criteria at the Department of Oral and Maxillofacial Surgery, (Dental clinic), Korle Bu Teaching Hospital, in the period between July 2012 and July 2017. Incidence proportions for the respective years were then computed for the years of review.

Results: A total of 243 patients were included in the study. This consisted of 121 males and 122 females, with an average

age of 42.9 years (SD=16.6), ranging from 18 months to 91 years. Incidence proportions for the years of the review were 8.2, 8.9, 17.7, 17.9 and 27.7 people per 1000 cases of tooth-related infections for the respective years.

With a fatality rate of 5.8%, the incidence of odontogenic infections among patients attending the outpatient Dental clinic of the hospital is 40.3%, while that of dentoalveolar abscess is 6.2%. Ludwig's angina was the commonest (52%) form of presentation of spreading odontogenic infection.

Conclusion: This study highlights the importance of persisting severe, near-fatal odontogenic infections in Ghana.

Not only is there a need to assess the public, professional and institutional strategies to management, but for more evidence-based studies in our local setting to aid in management.

Keywords: Odontogenic infection, Incidence, Cellulitis, Ghana



PATTERN OF ANTIBIOTIC USE AT THE DEPARTMENT OF SURGERY, KORLE BU TEACHING HOSPITAL

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³School of Public Health, University of Ghana, Accra

Background:

Antibiotics are among the most prescribed drugs worldwide for the prevention and treatment of infections. Misuse of antibiotics results in resistance and increased cost of healthcare

General Aim: To assess the current antibiotic prescribing and use pattern at the Surgical Department, Korle Bu Teaching Hospital.

Methodology: A prospective cross-sectional study was conducted at the Surgical Department, Korle Bu Teaching Hospital from 5th February-7th May 2019. Data collection sheets were used to extract data from prescriptions served at the Surgical Pharmacy and also from patients admitted to the General Surgery, Neurosurgery and Urology Units of the department over the study period. The views of doctors at the department were sought on their antibiotic use practice.

Results: Prescriptions served at the Surgical Pharmacy were mainly from Inpatients (1294/1715; 75.5%) as against Outpatients (421/1715; 24.5%) and 45% of all prescriptions (772/1715) had antibiotics.

The choice of antibiotics prescribed was influenced by doctors' previous experience (37/42, 88.1%), advice from their senior colleagues (20/42, 47.6%), from guidelines (22.42, 52.4%) and fewer times from pharmacists' advice (12/42, 28.6%).

For Inpatients, 24 different antibiotics were used over the period of study. Ciprofloxacin and metronidazole constituted 54% of antibiotics prescribed in the General Surgery Unit; Neurosurgery Unit mostly prescribed co-amoxiclav (40.8%) and ceftriaxone (23.9%) and the Urology Unit prescribed ceftriaxone (23.2%), ciprofloxacin (14.5%), levofloxacin (13%) and gentamycin (13%). Culture and sensitivity tests were done for 14.5% (9/62) of patients who received antibiotics for treatment.

Conclusion: The study shows that 45% of prescriptions at the Surgical Department contained antibiotics. Doctors mainly based their antibiotic prescription on their previous experience and few cultures were requested for treatment of infections. Ciprofloxacin, metronidazole and co-amoxiclav were the commonly prescribed antibiotics.



FOLLICULAR THYROID CARCINOMA WITH INTERNAL JUGULAR VEIN TUMOR THROMBUS – A CASE REPORT

R.N. Mayeden, Radiology Department-KBTH; K. Dzefi-Tettey, Radiology Department-KBTH

INTRODUCTION

Thyroid carcinoma with major cervical vascular tumor thrombosis is a very rare condition.

Imaging plays a vital role in patient assessment and diagnosis. Herein is a report of a case diagnosed by multimodality imaging, with review of existing literature. This is to create awareness amongst local practitioners managing such cases.

CASE PRESENTATION

A 68-year old woman with markedly elevated serum thyroglobulin levels (23200mcg/L) following total thyroidectomy for follicular carcinoma was evaluated with neck ultrasound to rule out residual tumor or recurrence.

At sonography, the thyroid bed was empty of any thyroid tissue.

A homogeneous solid lesion with mixed internal flow on color Doppler was seen in the distal left internal

jugular vein (IJV). A conclusion of left IJV tumor thrombus was made. Subsequently, CT Scan of the head and neck showed a lesion with a 'ring sign' in the distal left IJV close to the root of the neck. Nuclear imaging with radioactive iodine (RAI) confirmed an area of activity in the supraclavicular region as well as other areas in the chest and pelvis.

DISCUSSION AND CONCLUSION

Even though carcinoma of the thyroid has the potential for microscopic vascular invasion, IJV invasion by tumor is a rare occurrence, with prognosis implications. Although the lack of evidence-based guidelines makes management challenging, peri-operative radiological diagnosis and characterization of intravascular tumor thrombus is vital in guiding the management options.

KEYWORDS: *Follicular carcinoma, thyroid gland, internal jugular vein, tumor thrombus.*

THE EFFECT OF PHYSIOTHERAPY ON FUNCTIONAL OUTCOME OF STROKE PATIENTS AT THE STROKE UNIT AND MEDICAL WARDS.

Author(s): Cynthia Osei Yeboah, Samuel Ansah, Edward Ababio, Rollanda Aduamah, Hussein Botchway

Department: Department of Physiotherapy, KBTH

Background:

Immediate commencement of rehabilitation interventions in stroke patients can support better return of neurological functions and prevent complication, thus improving long term outcome and quality of life.

The Barthel scale which is used to measure performance in activities of daily living (ADL) and the modified Rankin Scale (MRS) which is also used for measuring the degree of disability or dependence in the daily activities of people who have suffered a stroke or other causes of neurological disability were used to evaluate the functional outcome following the physiotherapy management.

General Aim:

The aim of the study is to evaluate the functional outcome of stroke patients on admission at the Medical and Stroke Unit undergoing physiotherapy at the Korle Bu Teaching Hospital.

Methods:

A Prospective longitudinal study was used to follow up the functional outcome of patients undergoing physiotherapy management. The Barthel scale and the Modified Rankin scale were used to assess

the functional outcome of the stroke patients on admission at the Medical and Stroke unit undergoing physiotherapy at the Korle Bu Teaching Hospital.

Convenience sampling was used to select a total of One Hundred and Forty Seven (147) stroke patients for the study. Ethical clearance was sought from the IRB at KBTH, consent was sought from both the patients and their respective caretakers. Data was collected within a period of 6 months,

Results:

There was a statistically significant difference in the Barthel scores ($t=2.77, p=0.007$) and MRS scores ($t=3.56, p=0.001$) of stroke patients in the Stroke Unit and the Medical wards at the time of discharge with stroke patients in the Stroke Unit showing a better functional outcome as compared to the stroke patients in the Medical wards.

Conclusions:

Early progressive physiotherapy treatment of stroke patients will aid in an increase in the functional independence as the results of the outcome measure showed improvements following an early treatment of patients with stroke.

IMPACT OF PHARMACIST INTERVENTION ON CORD AND EYE CARE (CEC) PRESCRIBING PATTERNS IN THE OBSTETRICS AND GYNAECOLOGY DEPARTMENT OF A TEACHING HOSPITAL.

*Dr. Justice Dogbey, Dr. Daniel Ankrach, Pharm Diana Mintaah, Dr. Desmond Kwakye;
Obstetrics and Gynaecology Pharmacy, Korle Bu Teaching Hospital, 2019.*

Background

Neonatal deaths account for 40% of all death under five in Ghana. Newborns need special care and intensive monitoring and support in this vital period of growth. It is possible to increase perinatal survival and quality of life through prompt and adequate management of the newborn.

The Ghana National Newborn Health Strategy and Action Plan 2014-2018 sort to achieve this possibility, CEC are two of five Best Practices for all newborns: (1) Keeping the newborn warm to prevent hypothermia; (2) cord care; (3) eye care; (4) promotion of exclusive breastfeeding within one hour; and (5) routine immunizations (WHO, 2003). Evidence suggests that Chlorhexidine and Tetracycline interventions may have significant public health impact on neonatal infection and mortality in developing countries.

Objectives

Examine changes in the rate of newborn CEC prescribing rates in the Obstetrics and Gynaecology Department of Korle Bu Teaching Hospital, 3 months after a pharmacist-led presentation on prescribing patterns soon after the introduction of the new policy on CEC use

Method

This project consisted of a first analysis of prescriptions sent to the pharmacy for mothers about to put to bed (15th May 2018 to 15th August 2018) followed. A presentation of the findings was then made to the clinical Team on CEC pack prescribing rates. A second analysis (September 2018 to October 2018) was done to determine the change in prescribing rates after the

presentation. The data collected were analyzed with rates and descriptive statistics.

Results

First analysis - total of 2078 deliveries: 1) 15th May 2018- 15th June 2018; 635 deliveries, 45 (7%) CEC Packs used. 2) 16th June 2018- 15th July 2018; 641 deliveries, 200 (31.2%) CEC Packs used. 3) 16th July 2018- 15th August 2018; 802 deliveries, 201(24.94%) CEC Packs used. These represented 446 (21.46%) of CEC Packs used.

Second analysis - total of 2003 deliveries: 1) 15th September 2018- 15th October 2018; 752 deliveries, 614(81.65%) CEC Packs used. 2) 16th October 2018- 15th November 2018; 594 deliveries, 556(93.6%) CEC Packs used. 3) 16th November 2018- 15th December 2018; 657 deliveries, 589(89.65%) CEC Packs used. These represented 1759 (87.8%) of CEC packs used.

The CEC prescribing rates increased from an initial 21.46% to 87.80% due to pharmacist intervention to inform clinicians on the low rates.

Conclusion

The analysis showed post-presentation rates to be significantly - almost four fold higher than the pre-presentation rates. It can be concluded that the Pharmacist-led intervention was associated with an increase in CEC Pack prescribing rates for newborns delivered in the department. Overall, this project may perhaps encourage other pharmacy teams to evaluate strategies to improve medication prescribing and clinical outcomes within areas of practice.

HIV PROPHYLAXIS IN NEWBORNS OF HIV INFECTED MOTHERS IN THE OBSTETRICS AND GYNAECOLOGY DEPARTMENT OF A TEACHING HOSPITAL.

Dr. Justice Dogbey, Dr. Albert Opare; Obst/Gynae Department Pharmacy, Korle Bu Teaching Hospital, 2019.

Background

Despite high antiretroviral (ARV) treatment coverage among pregnant women for prevention of mother-to-child transmission (PMTCT) of Human Immunodeficiency Virus (HIV) in Ghana, the MTCT rate is still high. Ghana adopted the World Health Organization recommendations of stratifying pregnant women into “High” or “Low” MTCT risk for subsequent provision of HIV exposed infant (HEI) with appropriate follow-up care according to risk status.

In August 2019, Ghana changed the policy to classify all pregnant women as High MTCT Risk in the Consolidated Guidelines for HIV Care in Ghana- Test, Treat & Tract and the Department started the new regimen.

Objective

The study sought to ascertain among pregnant women who put to bed in the Maternity Department six months prior to the policy change, (January 2019 to July 2019):

1. The extent of deliveries that were considered high risk MTCT in the period of review

2. The extent of identified and initiated on appropriate ARV-, low and high-risk MTCT deliveries;

Methods

This was a retrospective study of records routinely collected in the Pharmacy after providing PMTCT Pharmaceutical Care over the period. Data retrieved from the records book was analyzed with rates and descriptive statistics.

Results

Out of a total of 5196 newborns, 140 (2.69 %) were born to identified HIV- positive mothers. Out of the 140 newborns born to HIV-positive mothers, 28 (20%) were classified as high risk and 118 (80%) low risk, according to the binary risk stratification of the previous guideline.

Conclusion

The study showed that a very small percentage of the newborns were classified as MTCT high risk in the binary (low/high risk) classification in the Hospital. A larger scale research is imperative to justify across-the-board classification of all babies born to HIV mothers in a Teaching Hospital, in the milieu of medication cost, safety and early resistance to ARVs.

AUDIT ON THE MANAGEMENT OF DIABETIC KETOACIDOSIS IN A TEACHING HOSPITAL IN ACCRA, GHANA

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Background

Diabetic ketoacidosis (DKA) is a major cause of mortality among children and adolescents with type 1 diabetes. Early recognition and appropriate management leads to improved outcomes.

The Department of Child Health (DCH), Korle Bu Teaching Hospital (KBTH) runs a Paediatric Endocrine Clinic with 24 registered patients with diabetes. Guidelines for management of DKA in DCH is based on a departmental protocol, introduced in 2015.

Objective

The objective of this study was to determine adherence to the protocol on management of DKA in DCH, KBTH. The audit standard was 90% compliance with the protocol.

Method

Retrospective review of the records of patients managed for DKA in the Emergency Room (ER) of DCH from January 2015 to March 2018.

Results

A total of 18943 patients were admitted to the ER over the study period. 12 patients (6/10000) had DKA. 7 patients (58%) had more than 1 episode of DKA, thus the total number of DKA episodes was 23. All episodes were included in the audit.

Record of date, time of admission and weight exceeded the audit standards; they were each documented in 96% of cases. Temperature, height and blood pressure were however

recorded in only 87%, 43% and 30% respectively.

Analysis of history-related parameters revealed that abdominal pain and polyuria/polydipsia were documented in 83% and vomiting, history of insulin omission and drowsiness in 74%, 52% and 30% of cases respectively.

Examination parameters generally exceeded audit standards. Dehydration were assessed in 91% of cases, respiration in 91%, consciousness level in 87% and other systems in 96%.

With investigations, urinalysis was requested and done in 83% of cases, full blood count in 83%, serum electrolytes in 52%, blood gas analysis and HbA1c in only 4%.

With the Nurses' chart, only heart rate exceeded the audit target (96%). The rest, including input-output charting were poorly documented

The time the first insulin dose was given was stated in 57% of cases.

Only in 78% of cases were attempts made to find cause of DKA. Counselling sessions were documented in only 57% of cases.

Conclusion

There was generally poor adherence to the protocol. The compliance standard of 90% was met or exceeded in only 4 out of 36 parameters assessed (11%). These results were probably as a result of poor dissemination of the protocol. The audit will be repeated in the third quarter of 2019, a year after it was made more accessible to the department.



KNOWLEDGE AND AWARENESS OF CHILDHOOD CANCER AMONG DOCTORS IN GHANA

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Background/ Objectives

Late presentation remains a barrier to achieving improved outcomes among children presenting to the two childhood cancer centres in Ghana. The objective of the study was to assess the level of knowledge of childhood cancer among doctors in Ghana.

Design/ Methods

An online questionnaire was disseminated to doctors in Ghana through the Ghana Medical Association's official Google Group mailing platform and social media group pages of doctors (estimated number reached was 1800).

Results

Of the 210 respondents, 51.4% were male, 38.1% General Practitioners and 23.8% worked in Paediatrics. About 7% had never seen a child with cancer in their practice. Majority (98%) knew childhood cancer was curable.

Only 28% knew the commonest childhood cancer in Ghana is lymphoma. For early warning signs of retinoblastoma, 77% chose leukocoria whereas 49% included proptosis, a late sign. Abdominal mass was identified by 82.9% as an early sign of Wilms tumour

while 42.9% incorrectly included gross abdominal distension. Pallor, bone pain and bleeding gums were identified as early signs of leukaemia by over 70% while a quarter incorrectly included jaundice. Ninety-nine percent identified lymphadenopathy as an early sign of lymphoma while 13.3% chose seizures.

Many thought the leading cause of poor treatment outcomes was poverty, and for 9% it was lack of adequate training of health personnel. Most (68.6%) knew childhood cancer treatment was primarily funded by parents.

Only a third felt confident in picking up early warning signs of childhood cancer. Surprisingly, 4% would not recommend chemotherapy for childhood cancer. Reasons included chemotherapy being toxic and ineffective in childhood cancers.

Conclusion

There is a need for training on early warning signs of childhood cancers among various grades of doctors in Ghana. This survey will need to be repeated post-training to assess the impact.



STAFF RADIATION DOSE LEVELS DURING FLUOROSCOPY GUIDED PROCEDURES: A PRELIMINARY STUDY AT KBTH

Nana, R. N., Boadu, M., Moyo, M.M., Gyekye, P.K., Botwe, B.O

Introduction:

Workers performing fluoroscopically guided procedures are exposed to high levels of radiation dose. These levels of radiation can cause detrimental health effect including cancer.

The continuous and systematic use of adequate protective equipment can significantly reduce exposures to workers directly involved in interventional procedures. Unfortunately, there is a lack of information on staff dose levels for safety assurance.

Aim: To estimate effective and eye lens dose to staff performing common fluoroscopy guided procedures.

Method: Four calibrated personal electronic dosimeters of type EPD MK 2.3 manufactured by Thermo Electron Corporation were used to measured dose reading of staff performing common fluoroscopy guided procedures. The study

subject included radiologists, cardiologists and a nurse.

Results: The estimated effective dose per month to cardiologists, radiologists and the radiology nurse were 0.01–0.03 mSv, 0.03–0.14 mSv and 0.02 mSv respectively.

The estimated eye lens doses per month to cardiologists, radiologists and the radiology nurse were also 0.15–0.30 mSv, 0.53–3.39 mSv, and 0.22 mSv respectively.

The effective doses per month to staff were below the ICRP acceptable limit of 1.67 mSv/month, however, the upper limit of the estimated eye lens dose for one radiologist exceeded the ICRP acceptable limit by a factor of 2.

Conclusion: Regular use of protective apparels (eg. lead goggles) and consistent eye lens dose monitoring is encouraged at the Hospital for dose optimization.



PATTERN OF ANIMAL BITES AND DELAYS IN INITIATING RABIES POST EXPOSURE PROPHYLAXIS AMONG CLIENTS RECEIVING CARE IN KORLE BU TEACHING HOSPITAL

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Background: Majority (44%) of the 55000 annual rabies deaths occurs in Africa. Post exposure prophylaxis (PEP) remains the only proven approach in preventing rabies deaths. Most of rabies deaths occur among those who delayed, did not receive or complete rabies PEP. The aim of this study is to determine the pattern of animal bite, factors associated with delays in initiating and non-adherence to rabies PEP regimen.

Method: Data on clients reporting for rabies PEP in a tertiary hospital setting in Ghana was collected from 2013 to 2016. Demographics, place and source of exposure were collected. Other information obtained included adherence to the PEP protocol and GPS coordinates of the town of animal bites. The shortest distance between the GPS coordinates of town of animal bite and the site of administration of the rabies PEP was calculated. A total of 1030 individuals received rabies PEP over the period.

Results: Overall, 52.9% (545) were males while 47.1% (485) were females. Majority of the cases were between the age group 1 - 10 years accounting for 29.2%. Dog bites accounted for 96.5% (n=994). Cats, Non-human primates, human bites respectively accounted for 1.8% (n=18), 1.2% (n=12) and 0.6% (n=6) of all bites. Majority of bites occurred at home [66.2% (n=646)]. Also, 31.6%

(n=308) and 2.3% (n=22) of bites occurred on the streets and neighbors/friends' homes respectively. Only, 18.7% initiated PEP within 24 hours of bite. Rabies PEP regimen completion rate was 95.2% (n=976). The median distance travelled to access rabies PEP was 7.87Km (IQR, 3.58 - 16.27) Km.

Overall, 34.7% (n=344) had the animal bite within 4.99Km radius of the treatment room of KBTH. Clients who delayed in initiating rabies PEP were 2.6 (95% CI, 1.3 - 5.1) times more likely to be males and 2.0 (1.1 - 3.9) times more likely to receive bites in a location more than 5Km radius from the KBTH treatment room. Gender, age and distance of bite from the treatment room, was not associated with the likelihood of not completing rabies PEP schedule.

Discussion and conclusion: Bites from suspected rabies infected animals remain a problem in southern Ghana. There are significant delays in initiating PEP for rabies prevention. Most animal bite victims are children ten years and below. Male gender and bites more than 5Km radius from the site of rabies PEP administration were most significant factors associated with delays in initiating rabies PEP. There is the need for adopting strategies to encourage prompt initiation and adherence to PEP.



ASSESSMENT OF EPIDEMIOLOGY OF PAIN INCIDENCE RATES DURING AND AFTER PREGNANCY

Eugenia Vicky Asare | William Ghunney | Edeghonghon Olayemi | Theodore Boafor | Yvonne Dei-Adomakoh | Enoch Mensah | Titus Beyuo | Yvonne Osei-Bonsu | Selina Crabbe | Charles Hayfron-Benjamin | Adetola A. Kassim | Andra James | Jude Jonassaint | Mark Rodeghier | Solomon Ofori- Acquah
| Michael R. DeBaun | Samuel A. Oppong

Background: Sickle cell disease (SCD) is a major public health problem in sub-Saharan Africa with increased morbidity and mortality in pregnancy. Acute pain episode is noted to be the most frequent complication and common cause of hospital admission. Despite the perception that acute pain rates are higher during pregnancy, no systematic study has been done to confirm or refute whether acute vaso-occlusive pain events occur more frequently during pregnancy when compared to after pregnancy; neither have any studies included a period of time after pregnancy.

The critical and unanswered questions are: 1) Is pregnancy associated with increased rates of pain in women with SCD when compared to when they are not pregnant? 2) Is increased inflammation during pregnancy also associated with increased pain rates? We hypothesize that 1) Acute pain incidence rates are higher in women with SCD during pregnancy compared to the non-pregnant state and 2) Vascular cell adhesion molecule-1 (VCAM-1) increases during pregnancy and is associated with increased rates of vaso-occlusive events when compared to post-delivery.

General Aim: To assess the epidemiology of pain incidence rates during and after pregnancy using electronic pain diaries. Additionally, we would evaluate the predictors of acute pain using serial specific laboratory tests [complete blood count

(CBC) with reticulocyte count, serum lactate dehydrogenase (LDH) test, liver function test (LFT), urinalysis (urobilinogen) and VCAM-1].

Methodology: We propose a prospective cohort study of 35 women with SCD over a three-year period at the Obstetrics department, Korle-Bu Teaching Hospital (KBTH), and the adult sickle cell clinic of the Ghana Institute of Clinical Genetics (GICG), Korle- Bu. Study time will be divided into two time periods- Pregnancy period [enrolment during first trimester (< 13 weeks gestation) to six weeks post-delivery] and Postpartum period (six weeks plus one day post-delivery to one year post-delivery). Pregnant women with SCD will be enrolled from the KBTH SCD Obstetrics (OB) clinic during their first trimester and followed up prospectively.

Daily electronic patient-reported outcome measures (use of the phone-based pain diaries that has previously been validated in adults with SCD followed for approximately 6 months) will be used to monitor the acute SCD pain episodes during pregnancy and one year post-delivery.

The primary outcome measure is incidence rates of pain in women with SCD both during pregnancy and post-delivery periods, whereas the secondary outcome measure is predictors of acute pain.

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FACTORS THAT AFFECT PATIENTS' COMPLIANCE WITH GLAUCOMA MEDICATION REGIMEN: A STUDY AT THE KORLE-BU TEACHING HOSPITAL.

Ms. Elizabeth Antwiwaa

Senior Nursing Officer, Lion's International Eye Centre

General Objective

The study was carried out to determine the level of compliance with glaucoma medication regimen among Ghanaians living with primary open-angle glaucoma.

The study also investigated the factors affecting compliance with medication regimen among patients with primary open-angle glaucoma in Ghana.

Design/Method

The study employed a descriptive cross-sectional design with a quantitative approach as its study design.

The researcher used both descriptive and

inferential statistics to analyse the data.

Results

The findings of the study revealed that persons living with primary open-angle glaucoma at the Korle Bu Eye Centre have high (73%) level of compliance with glaucoma medication regimen and this help reduce the risks associated with glaucoma and consequently improve the health status of patients.

Conclusion

In view of this, it is recommended that the Korle Bu Eye Centre, encourage patients with primary open-angle glaucoma to continue to comply with glaucoma medication regimen in order to reduce the burden of glaucoma.

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ASSESSMENT OF EPIDEMIOLOGY OF PAIN INCIDENCE RATES DURING AND AFTER PREGNANCY

Expected outcomes: We expect: 1) To enroll and follow up all the study participants within two years (Pregnancy period: 11 months; Postpartum period: 11 months for each study participant); 2) At least 80% of the women participating in the study can be retained and followed prospectively from enrolment through six weeks post-delivery to one year post-delivery; 3) At least 80% adherence to entry in daily electronic pain diaries (aim 1); 4) At least 80% data capture (both electronic and laboratory) during the study period (aims 1 and 2); 5) To identify modifiable risk factors associated with increased pain episodes in women with SCD living in Accra metropolis (KBTH and GICG) during pregnancy and post-delivery (aims 1 and 2); 6) To establish a

cohort of women with SCD at the end of the study period (three years); and present quantitative data demonstrating the long-term evaluation of pain episodes during pregnancy and one year post-delivery (aims 1 and 2).

The predictors of acute pain will be evaluated with a multivariable logistic regression model using the afore mentioned specific laboratory tests measured at enrolment (first trimester); gestational weeks 20, 28 and 36; 6-weeks post-delivery; then, 3-monthly for one year postpartum and will be repeated during acute admissions.

Funding Organization: American Society of Hematology Global Research Award (2019 - 2022)

FEASIBILITY OF MEASURING MUSCLE STIFFNESS IN PATIENTS WITH PARKINSON'S DISEASE USING THE MYOTONPRO DEVICE IN A CLINICAL SETTING IN AFRICA

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Background: Muscle stiffness (rigidity) in Parkinson's disease (PD) manifests in the form of increased resistance when the muscle is stretched passively. Therefore, the ability to measure muscle stiffness objectively in a clinical setting is important. A relatively new device, the MyotonPRO, offers the ability to assess muscle characteristics objectively.

Aims: The aim of this study is to examine the feasibility of using MyotonPRO to measure muscle stiffness in persons with PD in an outpatient setting for the first time in Africa.

Methods: Thirty adults with PD [66.3±8.9 (mean±SD) years, range 47-82 years] at Hoehn and Yahr Stages 1-3 were recruited from a Neurology Clinic and Physiotherapy Department at Korle Bu Teaching Hospital,

Accra, Ghana, and a local PD support group. The MyotonPRO (Myoton AS, Estonia) is a hand-held device that applies a brief (15 milliseconds) mechanical impulse (tap) to the skin over a muscle, via a rounded probe, causing damped oscillations of the tissues. Three tissue parameters recorded were stiffness (N/m), non-neural tone (frequency, Hz) and elasticity (log decrement). Three muscles

were tested with the patients lying in relaxed supine: biceps brachii (BB), flexor carpi radialis (FCR) and tibialis anterior (TA). A set of five impulses was only accepted if the coefficient of variation (CV) was 3% or below, as a measure of variability. Mean and standard deviations for tone, stiffness and elasticity were calculated.

Results: All 30 persons with PD were recruited and tested within eight weeks. Muscles were more difficult to measure in patients with greater tremor. This was indicated by the need to repeat sets of impulses where the CV was greater than 3%. Example data for the group from BB were: stiffness 240±31 N/m (mean, standard deviation); tone 13.6 Hz ±1.5; elasticity 1.49±0.31.

Conclusion: The Myoton technique is feasible and easily used in the clinical setting. Patients and physiotherapists found the Myoton technique acceptable. Research is needed to obtain comparative data from healthy participants in Ghana and the reliability needs to be tested between different days. The present findings suggest that exploring potential clinical uses of the MyotonPRO, such as measuring the effects of interventions, is warranted.

COMPARATIVE ANALYSIS OF KIDNEY STONE COMPOSITION IN PATIENTS FROM GHANA AND SOUTH AFRICA: CASE STUDY OF KIDNEY STONES FROM ACCRA AND CAPE TOWN

EA. Akpakli, L. Kaestner, J. Lazarus

Aim: The primary aim of this study was to describe and compare the kidney stone composition of kidney stone patients receiving treatment at the Korle-Bu Teaching Hospital (KBTH), Accra (Ghana) and Groote Schuur Hospital (GSH), Cape Town (South Africa).

Methods: The study was a retrospective folder review of patients treated for kidney stone disease at the Korle-Bu Teaching Hospital in Accra (Ghana) and Groote Schuur Hospital in Cape Town (South Africa). Patients who were treated for kidney stone disease between 1st June 2016 and 31st May 2018 were recruited and their folder numbers were retrieved from theatre log books.

A total of hundred and sixty-three (n=163) folders (n=30 KBTH; n=133 GSH) were subsequently retrieved from the records department of the two facilities. Demographic data and kidney stone analysis results were extracted and analyzed using the R statistical software.

Results: The age of participants at the KBTH ranged from 24 to 75 years with a median age of 45 years, while the ages of participants at the GSH ranged between 19 to 77 years with a median age of 48 years.

Males were the majority stone formers for both hospitals [56.7% KBTH; 59.4% GSH]. However, there was no significant statistical difference in gender ($p=0.9447$) and age

($p=0.2612$) between the two groups. Calcium oxalate (86.7%) and uric acid (90.0%) were the commonest components of the kidney stones analyzed from the KBTH. Calcium oxalate (66.2%) and carbonate apatite (40.6%) emerged as the most common components of the stones analyzed from the GSH. Brushite (3.0%), cystine (3.8%) and struvite (19.6%) stones were only found in the stones of participants receiving treatment at the GSH.

All kidney stones from the KBTH were mixed; made up of at least two chemical components. Pure kidney stones were only found among the GSH dataset constituting 48.9% of all the stones analyzed. While all KBTH stones were mixed stones, female patients from GSH formed more mixed stones than their male counterparts (M:F = 40.5%:66.67%). Infection kidney stones (struvite and carbonate apatite) were also predominantly found among female stone formers in this study.

Conclusion: The findings indicate that the participants from the two facilities are not different in terms of gender and age.

However, the composition of stones was found to be different between participants from both hospitals. This suggests that kidney stone composition may be influenced by patients' geographical location and/or cultural background. Further studies with prospective or longitudinal data and larger samples are needed to provide more insight into the composition of kidney stones of African patients.

PHARMACEUTICAL INTERVENTIONS ON PRESCRIBED MEDICINES IN THE MEDICAL DEPARTMENT OF THE KORLE BU TEACHING HOSPITAL.

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Background

Pharmaceutical intervention refers to any recommendation suggested by a pharmacist during any phase of the patient medication process. Hospital Pharmacists are expected to make interventions during the multidisciplinary team (MDT) inpatient rounds and also to document and make follow-ups of the interventions made.

A standardized data collection tool was developed to document all clinical pharmacy interventions undertaken a two month study period.

Objectives

To describe the demographics of inpatients; pharmaceutical interventions performed by clinical pharmacists during the MDT rounds and to determine the classes of medications, which received interventions.

Methods

A total 116 clinical interventions were proposed for 52 patients (mean age: 46years, range 18-83 years). Data on patients demographics (name, age, sex), medications prescribed and interventions made were documented and analyzed using Microsoft excel.

Results

There were more females (52%) than males, with majority of participants(29%) within the (21-30) years age group. Majority of the interventions were counselling and monitoring needs(41%), followed by additional needs(19%), such as clients requiring to meet a dietitian or psychologists,etc. with drug administration errors being the least intervention made(3%). Antipsychotics received the greatest percentage of intervention(25%), followed by antihypertensives (20%) with antidepressants being the least(7%). Eighty-five percent of these interventions were accepted by the medical staff during the MDT rounds.

Conclusion

This study revealed that the provision of clinical pharmacy services on the medical wards has a potential of generating a wide range of interventions aimed at optimizing patient care. Pharmacists must also intensify the monitoring and counselling needs (including discharge counselling) of patients on the wards.

Antibiotic utilization for surgical prophylaxis during the first 24 hours of onset of surgery at the Korle Bu Teaching Hospital.

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Introduction: The risk of an infection during surgery is real and it is always important to avoid this as much as possible. Surgical site infection (SSI) develops at the incision site and is normally attributed to surgery. The mainstay in the prevention of SSI involves the use of antimicrobial agents. This must be appropriate and must be administered at the right time to ensure maximum benefits.

Aim: Our main aim was to identify the various types of antibiotics used for surgical prophylaxis during surgery at the Korle Bu Teaching Hospital.

Method: This was a baseline cross-sectional activity to identify antibiotics used at the various theatres. Data were collected at the Obstetrics and Gynaecology (OBGY), and Surgical Pharmacies (SURG) from 1st October, 2018 to 31st January, 2019. Normally folders of all patients who go for surgery are brought to the pharmacy for assessment prior to discharge.

Using the anaesthesia sheet, information on day of surgery, when antibiotics was administered, type of antibiotics, when anaesthesia started, when incision was done, and when surgery started, were captured from folders. Data were analysed to identify the type of antibiotics used in the Hospital for surgical prophylaxis. We performed a sub group analysis stratifying by type of department to study antibiotics being used.

Results: The most used antibiotics for

surgical prophylaxis at the OBGY was a combination of amoxicillin clavulanic acid and metronidazole accounting for 93.7% of all OBGY cases. The use of Amoxicillin clavulanic acid alone accounted for 3.6% of all OBGY cases. A combination of Ceftriaxone (Rocephine) and metronidazole, and Ceftriaxone (Rocephine) and Gentamycin was used in 0.9% of cases respectively.

A combination of Ciprofloxacin and metronidazole was the most used antibiotics at SURG accounting for 24.3% of cases. This was closely followed by Amoxicillin clavulanic (21.6%) of cases. The use of Ceftriaxone (Rocephin) accounted for 10.8% of all SURG cases. Other SURG cases were combination of Ceftriaxone (Rocephin) and Flucloxacillin (8.1%), Ceftriaxone (Rocephin) and Gentamycin (5.4%), Meropenem (Meronem) 2.7% of cases.

Limitation: The sample size was not very large. Less than 200 cases were looked at, but it still gave a snapshot of what types of antibiotics are being used for surgical prophylaxis in the Hospital.

Discussion: This baseline activity was carried to identify the types of antibiotics being used for surgical prophylaxis and to advice on the need for antibiotic treatment protocol for surgical prophylaxis at KBTH. While it was obvious that a particular regimen (amoxicillin clavulanic acid and metronidazole) was being used at OBGY it was not very clear which antibiotic is the mainstay at SURG.

EFFECT OF CHLORHEXIDINE GEL FOR CHORD DRESSING – VIEWS FROM HOSPITAL PHARMACISTS ON SOCIAL MEDIA.

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Introduction: Chlorhexidine is a broad spectrum antiseptic agents used over several decades in hospitals and other clinical settings. Many countries with a high neonatal mortality have seen a decline in infection and mortality when chlorhexidine is applied to the baby's umbilical cord within 24 hours of birth.

Aim: To identify the views of hospital pharmacists on the effectiveness of chlorhexidine gel (CG) for chord dressing among neonates in hospitals in Ghana.

Method: A Phenomenological retrospective qualitative study was carried out. Data were collected from the views, self-reports or narratives of participants on the TWO Government and Hospital Pharmacists of Ghana (GHOSPA) social media (Whatsapp) platforms and on Pharmacists' Facebook platform within the period January to June 2019. Data collected were on cases of Neonatal cord sepsis associated with the use of Chlorhexidine Digluconate gel or methylated spirit as antiseptic agents. Various views expressed by contributors during the period on the platforms were extracted retrospectively by two drug information pharmacists and analyzed by two pharmacists.

Results: There were 25 comments from 20 pharmacists with male contributors dominating (72% (18/25)). Commenting pharmacists were mainly from hospitals in the Greater Accra, Volta, Western and Ashanti regions. Some of the comments are as follows:

From a female pharmacist, "I had a baby last

year. I applied it (CG) for one week and noticed the cord was turning green like it was growing mouldy. I panicked and dumped it somewhere. I went back to alcohol until the cord fell off safely. Until this discussion came up I had always thought I was probably not applying it well".

From a male contributor: "Could it (neonatal cord sepsis with CG) also be a problem with the particular brand around?"

From another male contributor: "Aseptic techniques versus antimicrobial agents??? I thought the two modalities were mutually exclusive.

From another male pharmacist: "The question is, what was wrong with alcohol which was used before introduction of chlorhexidine?"

From a female contributor: "Is it possible to get all the documentary evidence for the next steps? Policies are not cast in stone. Any new evidence is helpful to advance the course. Let us go, colleagues."

From a male contributor: "Good we are observing and receiving feedback. Documentation and evidence is the game. For those experiencing this, can we put together some case reports or case series for presentation probably at AGM or Senior Managers Meeting?"

Discussion: Information from literature is clear about the benefits of CG in neonates. However, observations from this mini-study seem to provide a different view. Could it be a process or product issue? More work needs to be done including involvement of the regulatory agency.

MEASURING MUSCLE TONE OF STROKE PATIENTS USING THE MYOTON PRO DEVICE: FEASIBILITY IN A CLINICAL SETTING IN AFRICA

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Introduction Management of muscle tone is an important part of treatment for stroke. There is a lack of an objective measure to assess muscle tone of stroke patients in a clinical setting. Mechanical properties of muscle, such as non-neural tone and stiffness, can be measured accurately using the novel MyotonPRO device.

Aim This study aimed to explore the feasibility of using the Myoton PRO device to measure tone in stroke patients in a clinic setting for the first time in Africa.

Methods Thirty adults with acute and subacute strokes were recruited from the Stroke Unit and Physiotherapy Departments of Korle Bu Teaching Hospital,

Accra, Ghana. The Myoton PRO (Myoton AS, Estonia) is a hand-held device that applies a brief (15 milliseconds) mechanical impulse (tap) to the skin over a muscle, via a rounded probe causing damped oscillations of the tissues.

The stiffness (N/m), non-neural tone (frequency, Hz) and elasticity (log decrement) were calculated simultaneously within the device. Recordings were performed with patients in a relaxed supine

position. The muscles tested were biceps brachii (BB) and flexor carpi radialis (FCR) in the upper limb and tibialis anterior (TA) in the lower limb). A sets of five taps impulses was only accepted if the coefficient of variation (CV) was 3% or below, as a measure of variability. Mean and standard deviations for tone, stiffness and elasticity were calculated.

Results The 30 stroke patients were recruited and studied within a period of eight weeks. Data were easier to record from the BB than TA, due to ease of positioning and in those with dense weakness. The difficulty in obtaining consistent data was indicated where the CV was greater than 3%, and the test needed to be repeated. Example data for the group from FCR were: stiffness 428 ± 104 N/m (mean, standard deviation); tone $20.4\text{Hz} \pm 3.7$; elasticity 1.41 ± 0.42 .

Conclusions The Myoton PRO device was easy to use and accepted by the physiotherapists and patients. The technique was feasible in the clinical setting in Ghana. There is a need to carry out further research to obtain comparative data from healthy Ghanaians. Reliability also needs to be tested within and between days before the technique can be used to monitor the effects of treatment.

EFFICACY OF ACUPUNCTURE IN THE MANAGEMENT OF ADHESIVE CAPSULITIS. A PILOT STUDY.

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Background:

Adhesive capsulitis (AC) is a common disorder of the shoulder that causes pain and reduced range of motion. Men are affected more than women, but there is no known racial or genetic tendency. Most patients with AC will improve with conservative treatment such as medications and various techniques of physiotherapy. Acupuncture has been considered safe and effective in the management of soft tissue disorders. However, its application in the management of AC is not yet sufficiently reported in literature for referencing among the Ghanaian Physiotherapists.

General Aim:

The aim of this study was to investigate the efficacy of acupuncture in the management of patients with AC with regards to their impairment and functions.

Methods:

A randomized controlled clinical trial was carried out involving 10 patients who were recruited from the Physiotherapy Outpatient Department of Korle Bu Teaching Hospital. Clinical criteria for selection were based on history and physical examination performed by Resident Orthopedic Physician and an Experienced Musculoskeletal Physiotherapist.

Participants were randomly assigned to two groups as follows: exercise group and exercise with acupuncture group. Both groups received treatment twice weekly for a period of six weeks. The Constant- Murley Shoulder Score (CSS) and the Visual Analogue Scale were adopted as the main outcome measures for assessing pain, range

of motion and upper limb functionality level. A baseline measurement was taken on first contact and subsequent follow-ups assessments were done at the end of week three and week six. Descriptive and inferential analyses were performed using SPSS v 22 at 95% confidence interval.

Results:

Ten (10) participants with complaints of AC of either right or left shoulder partook in this study of which 70% were males. They were within the age range 35-80 years with a mean age of 59.9 ± 15.39 years. There was no statically significant difference in baseline measurement among control and intervention groups on VAS and CSS.

At the end of six weeks intervention, the post treatment scores show significantly higher improvement than baseline scores for pain, ROM and functional level in both groups. Comparison of outcome measures in both groups shows participants in the interventional group did not show statistically significant improvement than those in the control group on VAS($F=0.615$; $p<0.455$); CSS ($F=0.125$; $p<0.7333$); flexion($F=0.147$; $p<0.711$); abduction($F=0.018$; $p<0.897$).

Conclusions:

The study showed that either exercises only or in combination with acupuncture is effective in reducing pain, improving ROM and upper limb function in patients with AC. Nevertheless, the combined application of acupuncture and exercises indicates potential benefits in the management of the condition given the better post-treatment scores in this study.

EFFECTS OF INCREASED HAEMOLYSIS ON FETO-MATERNAL OUTCOMES IN PREGNANT WOMEN WITH SICKLE CELL DISEASE

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Background: Sickle cell disease (SCD) is a major public health problem in sub-Saharan Africa. Recent advances in technology and improvement in healthcare, have ensured significant increase in survival; hence an increase in chances of getting pregnancy. Chronic haemolytic anaemia is a feature of SCD; and haemolysis, has been linked to the chronic uncompensated anaemia, pulmonary hypertension, chronic leg ulcers, priapism, renal impairment, acute vaso-occlusive events [acute pain episode, acute chest syndrome (ACS)], venous thromboembolism (VTE) and death that occurs in SCD. Hyperhaemolysis occurs in stressful conditions, and pregnancy can be considered stressful.

Pregnancy in SCD, is a life-threatening condition associated with poor fetomaternal outcome. Few studies, however, have looked at the frequency of hyperhaemolysis during pregnancy and its association with fetomaternal outcome. We hypothesize that increased haemolysis will result in poor fetomaternal outcome in pregnant women with SCD.

General Aim: To determine the effects of increased haemolysis on fetomaternal outcomes in pregnant women with SCD using specific markers of haemolysis- haemoglobin (Hb), reticulocyte count, serum lactate dehydrogenase (LDH), indirect serum bilirubin and urobilinogen

Methodology: A prospective cohort study with 25 consenting pregnant women with SCD, and their 2 sets of matched controls- 25 pregnant women without SCD and 25 non-pregnant women with SCD will be conducted at the Obstetrics department, KBTH, and the adult sickle cell clinic of the Ghana Institute of Clinical Genetics (GICG), Korle Bu. The pregnant women with SCD will be matched for gestational

age to a set of pregnant women without SCD; and matched for age (± 2 years) and phenotype to the non-pregnant women with SCD. The primary outcome of this study is to determine the association between hyperhaemolysis and fetomaternal outcome in pregnant women with SCD.

The main maternal outcomes to be assessed include the effects of increased haemolysis on acute pain episodes, ACS and anaemia; whereas the main fetal outcomes to be assessed include the effects of increased haemolysis on spontaneous abortion, intrauterine fetal death/stillbirth, preterm birth, low birthweight and perinatal mortality. For the pregnant women (both cases and controls), the following listed markers of haemolysis- haemoglobin (Hb), reticulocyte count, serum lactate dehydrogenase (LDH), indirect serum bilirubin and urobilinogen will be assessed at enrollment (2nd trimester), during acute events, and at 28 and 36 weeks gestation, and at six weeks postpartum. All pregnant women will be followed up prospectively till six weeks postpartum.

All non-pregnant participants will be followed up prospectively till when their matched cases exit the study at six weeks postpartum. An excel based data extraction chart will be used to extract data from study participants. Data will be analysed by the use of means, standard deviation, analysis of variance (ANOVA) and multivariate analysis using SPSS version 22.

Expected Outcomes: At the end of the study, the association between hyperhaemolysis and fetomaternal outcome in pregnant women with SCD; as well as the frequency of hyperhaemolytic episodes during pregnancy will be determined. The steady state of some selected markers of haemolysis in both non-pregnant and pregnant women with SCD will also be estimated.

Factor VIII Inhibitors Among Haemophilia A Patients at the Korle Bu Teaching Hospital

Awuku N.A., Dei-Adomakoh Y., Olayemi E.

Background: Haemophilia is an inherited bleeding disorder resulting from mutations in the Factor VIII (FVIII) or Factor IX (FIX) gene. Haemophilia clinically manifests as bleeding into joints, soft tissues and muscles after minor trauma or spontaneously.

Recombinant factor replacement is the mainstay of treatment with inhibitor formation remaining the major challenge in the treatment with factor concentrate.

General Aim: This study seeks to determine the prevalence of factor inhibitor among patients with Haemophilia A.

Methods: Prospective study involving all haemophilia A patients attending both adult and paediatric clinics at

Korle Bu Teaching Hospital (KBTH) will be recruited after giving informed consent or assent and or parental permission where appropriate.

A data extraction form will be used to extract clinical data from the patient's medical records/folder.

4.5mls of blood will be taken for inhibitor assay using Nijmegen-Bethesda Assay. Statistical analysis will be done using STATA version 13

Expected Outcomes: At the end of the study, clinical characteristics of haemophilia patients will be established as well as prevalence of factor VIII inhibitor among patients on “on demand” recombinant factor therapy will be known as well as factors associated with the development of factor inhibitors if any.



Characteristics and Treatment Endpoint of Immune Thrombocytopenia at the Korle Bu Teaching Hospital

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Background: Thrombocytopenia is a common reason for referral to haematology outfits. It is of varied aetiology of which immune thrombocytopenia (ITP) is an important cause.

The treatment target in ITP is for patients to reach a safe platelet count with no bleeding, and not necessarily to achieve a normal platelet count.

The first line of treatment for ITP is corticosteroids and studies have shown adverse effects such as increased risk of hypertension, hyperglycaemia, weight gain in individuals on long term corticosteroid use.

There is very scanty data on ITP, clinical characteristics as well as treatment targets in Ghana

General Aim: To determine characteristics and treatment endpoint in patients with ITP at Korle-Bu Teaching Hospital

Methods: This study is a retrospective study over a 10-year period that will be conducted at the Haematology Department of the Korle Bu Teaching Hospital (KBTH).

Folders of all patients diagnosed with Immune Thrombocytopenia (ITP) over the period of study will be studied for demographics, clinical presentation, drug history, bleeding pattern at presentation, platelet count at presentation, results of HIV, HCV, H pylori and Bone marrow aspirate for cytology, platelet count at which patients are symptom free, type of therapy patient received, duration of treatment till remission, platelet count at relapse and time interval between relapse

Expected Outcome: This study seeks to establish the clinical characteristics of ITP including bleeding patterns, indications for therapy, symptom free platelet threshold, type and side effect of therapy used and response

CLINICAL PRESENTATIONS AND TREATMENT OUTCOMES OF CHILDREN WITH TUBERCULOSIS IN KORLE BU TEACHING HOSPITAL

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Background: Tuberculosis (TB) is the top infectious killer worldwide as reported by the World Health Organization (WHO). Childhood TB continues to be a significant public health challenge despite the availability of effective treatment and preventive measures (vaccination).

Aim: The aim of this study was to describe the clinical presentations of paediatric TB patients related to demographic factors, HIV status and disease site and to assess treatment outcomes of children with TB at Korle Bu Teaching Hospital (KBTH).

Methods: We performed a retrospective data review of all children diagnosed with TB who were registered at the Department of Child Health, KBTH from January 1st 2015 to December 31st 2016. Treatment outcomes were recorded as treatment success (completed treatment) and poor outcome (died, default, lost to follow up and failed). Data was entered into excel and exported into SPSS v.23 for statistical analysis.

Results: A total of 172 children were diagnosed of TB during the period under review of which, 117(68%) cases were pulmonary and 55(32%) were extra pulmonary TB. The most frequent site of extra-pulmonary TB was lymph nodes, 55(62%). Children under 5 years of age formed the majority of patients 105(67%). Seventy-eight 78(45%) of the children were co-infected with HIV.

A successful treatment outcome was reported for 116 of the 172 children registered, which gave an overall success rate of 67%. Death rate was two-fold higher among HIV positives (30% versus 15% among HIV negatives).

Conclusion: The treatment completion rate of 67% is well below the 87% target of the National TB Control Programme. Death was the major category of poor treatment outcome irrespective of HIV status.

Further studies are needed to investigate the causes of mortalities and address the preventable causes of death in both HIV positive and HIV negative children.

E-HEALTH PRE-IMPLEMENTATION SURVEY AT THE DEPARTMENT OF POLYCLINIC

Pius Andrew Agbeviadey, Policy Planning, Monitoring and Evaluation Unit & Research Unit

Background

Many hospitals today are considering implementing this technology to provide medical information and care in a better way. EHRs, an aspect of HIS, is seen as a powerful tool, which provides a great number of benefits in one of the data intensive industries like the healthcare industry.

The Introduction of Electronic Health Record (EHR) systems, have the potential of improving the quality and reliability of health information and communication and the overall quality of healthcare services in the healthcare system.

Reliable health information leads to timely health policies and planning, which improves the general health status of a country, as well as, serving as a vital element for individual health facilities in managing and improving healthcare delivery.

On October 1st 2019, the Polyclinic and Family Medicine Sub BMC commenced an Electronic Health Records (EHR) system as a pilot project that would progressively roll out to the entire Hospital.

However, though the EHR system is being flaunted as the “perfect” replacement for paper-based patient records system, it was still necessary to explore the extent of staff knowledge, perception and preparedness for the exercise; especially when literature suggests that the involvement of users in system specification and evaluation of performance of EHR is one key factor towards successful realization of EHR

benefits.

General aim

The main objective of the study was to assess staff's knowledge, perception and preparedness for the EHR system's implementation and use.

Method

Data collection employed the use of electronic questionnaires using hand-held mobile phones administered by trained research assistants from the Research unit of the hospital. A simple random sampling approach was used to select the respondents.

Results

About 70% of respondents indicated their readiness to use the EHR system and that the EHR system would make it easier for the users to retrieve patients past medical records and improve health service delivery. The results also showed that staff are motivated and maintaining a high level of benefit realization expectations at the full implementation of the system. However, some challenges identified by users (staff) of the system that could potentially affect the implementation process included, unstable system, internet fluctuations and staff shortage.

Conclusion

Staff was overwhelmingly ready to use electronic system and providers should take a close look at improving the infrastructure that will support the system to ensure a successful implementation.

FACTORS THAT AFFECT PATIENT FLOW AT THE ACCIDENT AND EMERGENCY DEPARTMENT OF THE KORLE- BU TEACHING HOSPITAL

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Background:

Overcrowding within hospital emergency departments (AED) in most low-middle-income countries (LMIC) such as Ghana, is increasingly becoming a significant public health threat, compromising quality healthcare services delivery.

Frequent congestion as a result of obstruction in patient flow limits the needed timely access to accident and emergency (A&E) services. The AED of Korle-Bu Teaching Hospital - a foremost tertiary healthcare facility in Ghana is often congested.

General Aim: To identify and discuss bottlenecks within patients' journey at the Accident and Emergency Department of the Korle Bu Teaching Hospital

Method: The study was based on observations made through personal work experience at the AED and an extensive review of the literature. The input-throughput-output conceptual framework for acute care settings was adapted to identify and analyse patient-flow factors.

Results: The study identified nine probable delay factors; categorised into one input: patient type and condition presented; six throughput: triage organisation; payment and billing processes; inpatient transfer process;

diagnostic services and treatment; admission policy and involvement of specialist services; finance and family-related issues; and two output factors: mortuary services; and inpatient capacity.

Of these, five were similar to high-income country settings, and four apparently peculiar to LMIC. Two factors were identified as internal to AED, while five were external. Two others - payment and billing processes, and finance and family-related factors - were cross-cutting, with fees collection being a contradiction to A&E policy.

Conclusion: Delay factors are interlinked. Some are outside the AED's span of control and more related as a result of the institution's wider organisation of care, and some national health systems issues.

The findings highlight the need for a better understanding of healthcare policies interaction and implementation within hospital settings. Resolving overcrowding in LMIC tertiary hospitals AED requires a system-wide approach.

Further measurement studies on the identified factors is recommended to inform the harnessing of process improvement tools to improve A&E services.

OUR VIEW OF THE BETTER LIVES PROJECT; TRACKING CARE FOR PATIENTS WITH SEVERE MENTAL DISORDERS.

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Background: Patients with severe mental disorders (SMD) (moderate to severe depression, bipolar disorder, schizophrenia and other psychotic disorders), in comparison to the general population, have two to three times higher risk of morbidity and mortality. This is mainly attributed to the nature of illness, unmanaged metabolic side effects of psychotropics, poorly managed comorbid chronic physical illness such as diabetes, stigma, etc.

It is expected that adherence to the available protocols/guidelines will result in patients with SMD living longer and healthier lives and the achievement of the sustainable development goals (SDG), in particular SDG 3 and 3.4b.

The department of Psychiatry convened a team to develop the Better Lives Project (BLP), a multidisciplinary project to improve health outcomes of psychiatric patients through regular physical checkup, appropriate medication selection, adherence counseling by pharmacist, psychologist review, and preventive and interventionist weight management strategies.

Objective: To assess the uptake of the BLP into the regular clinic procedures of the Department of Psychiatry between July and October 2019.

Methodology: We assessed uptake by reviewing 89 out of the 171 folders in the project currently to ensure that patients' weight and height had been regularly recorded, and baseline physical test reports filed. We also checked if follow up tests had been conducted, and appropriate referrals made where weight gain or loss was above expected criteria.

We also looked at medication reviews using the agreed protocol and pharmacare checklist as criteria guide. We examined patient-related and written communications among staff.

Results: There were 101 care issues initially identified within the 89 folders which included excess weight gain, medication review, need for adherence counseling and use of psychotherapy services. 47 patients had gained weight greater than 7% of their baseline within 2 months.

Of the 14 patients who needed psychotherapy, 6 (43%) had been assigned a therapist.

Of the 52 who needed adherence counseling, 21 (40%) had been counseled and of the 25 who needed medication reviewed, (48%) had had their medication reviewed. Nine (9) patients had not had their BMI assessed at all while 17 had not had their labs also done.

Overall, of the 101 care issues flagged, half (50.5%) had been addressed. A similar study done in the department last year without the BLP, on management of weight gain while on Olanzapine, showed only 18% management according to protocol.

This shows almost 200% improvement in attendance to flagged care issues using the BLP. Conclusion The BLP has proved to be an effective tool in tracking and attendance to excessive weight gain, medication adherence and use of psychotherapy services. We recommend that all care providers receive a day's workshop on how to track patient care within the new system and suggest ways of further improving the BLP.

