Global Pathology

Reestablishing Diagnostic Anatomical Pathology Services by a Fine-Needle Aspiration Clinic in Monrovia, Liberia

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Objective/Background: Two civil wars and the Ebola epidemic left Liberia with essentially no reliable anatomical pathology services. There had been absolutely no cytology, histology, or forensic services in Monrovia, the nation's capital.

Methods: The needs have been assessed and a long-term plan was made by consulting the local physicians and administrators. Potential workforce and financial resources have been identified along with the most suitable location to set up a fine-needle aspiration (FNA) clinic as the first step to rebuild the diagnostic services.

Results: The first FNA was performed on January 8, 2018, in the JFK Hospital in Monrovia, and it was followed by 64 other procedures until the end of February. Forty-nine female and 16 male patients went through the diagnostic procedures. Forty-four samples resulted in a benign and 14 in a malignant diagnosis, while 7 were nondiagnostic. Diff-Quick stain was used to prepare the slides, and due to the limitations, cell blocks were not performed for ancillary studies. The diagnostic pathology reports can assist the clinicians now to build a better treatment plan for the patients, and they will also help to build a national diagnostic database.

Conclusions: Liberia's health care is still in very poor shape, and the lack of reliable diagnostic services is one of the biggest challenges. FNA has turned out to be a cost-effective method to provide a diagnostic assessment. However, in the long run, consistent planning, persistent joint efforts by the local and foreigner organizations and physicians, and a lot of volunteer help will be needed to improve the pathology services and education in the country.

Overview of Multiple Myeloma in Rwanda

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Objectives: Multiple myeloma is a multifocal plasma cell neoplasm associated with monoclonal protein on serum/urine electrophoresis. The diagnosis involves routine blood counts, bone marrow biopsy, special stains, and immunofixation. Cytogenetics is not yet available in Rwanda and the majority of African hospitals.

Methods: Since 2011, 33 patients diagnosed with multiple myeloma have been seen in a hematology clinic. The pathology workup in Rwanda for multiple myeloma patients involves routine blood tests, bone marrow biopsy, serum protein electrophoresis, and immunofixation. Skeletal survey using conventional x-ray and CT scan was also performed. In Rwanda, we are still lacking cytogenetic studies, an important diagnostic technique that helps in disease classification and prognosis.

Results: Thirty-three patients were studied. The median age was 44.6 years (range, 40-87), with an early age of presentation in our population. The majority of the patients (61%) presented at the clinic with a pathological fracture. Imaging showed an extensive lytic lesion in the majority of patients on simple conventional x-ray. More than 70% of our patients presented with a high plasma cell burden with more than 40% of plasma cells. The immunofixation showed IgG kappa as the predominant form in 68%. Anemia was the hallmark of the disease with a hemoglobin of less than 9 g/dL in the majority of patients (72%). Renal failure was predominant.

Conclusion: This overview brings a light on the practice of pathology in Rwanda. There is a lot to improve in terms of early diagnosis. Contrary to European countries, myelomas present at a very early age in our population compared to Western data. Further research should be done to determine risk factors in the black population compared to the Caucasian population. Autologous stem cell transplantation improves the overall survival of myeloma patients; hence, access to the therapy should be a topic of discussion in resource-limited countries.

Cervical Cancer in Haiti, a Major Public Health Problem: A Retrospective and Descriptive Study on Cervical Cancer Biopsies Carried Out in the Capital’s Laboratories From 2013 to 2015

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Objectives: Our goals of this study are to better understand the causes of cervical cancer in Haiti and the reasons for the screening failure. This study will help us understand the cervical cancer prevalence during the study period to determine if it is a public health emergency and to generate recommendations for a possible screening strategy in Haiti.

Methods: This is a descriptive, multicentric, and retrospective study of precancerous and cancerous cervical lesions from January 2013 to December 2015. We collected data by direct consultation of various files and/or registers from the archives of the various laboratories for the study period. Data are aggregated into four categories: (1) the sample size includes all women who have had a cervical biopsy (single biopsy, endocervical curettage,
Pseudomyxoma peritonei is a clinical termology for intrabdomino-pelvic jelly-like mucous masses, generally due to peritoneal involvement by mucinous tumors of the appendix. However, other gastrointestinal organs, ovaries, and very rarely the cervix may serve as primary sites. We present an unusual presentation of a low-grade mucinous carcinoma from the cervix with pseudomyxoma peritonei in a postmenopausal woman.

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**Case Report:** We report a 50-year-old female followed in rural upcountry hospital in Tanzania from mid-2017. She presented with abdominal distention and per-vaginal bleeding. Ascites and a uterine cervical tumor involving the upper two-thirds of the vagina were noted on clinical examination. Clinical diagnosis was cervical carcinoma and a biopsy was taken from the cervix. We received multiple gray-white pieces of tissue measuring 5 × 3 × 1 cm. They were soft with jelly-like mucus and were whole blocked in two cassettes. On microscopy examination, the ectocervix was normal, and the endocervix showed severe dysplasia of columnar cells. Large extracellular mucin lakes and cysts were seen in the stroma. There were highly irregular glands exhibiting variable stratifications of large hyperchromatic cells with moderate pleomorphism and abundant cytoplasm. Cysts also were lined by pleomorphic hyperchromatic columnar cells. Mitotic activity was high. Calcifications were occasionally seen. Alcian blue and periodic acid–Schiff stains were strongly positive.

**Results:** After careful analysis of the data, we have seen that cervical biopsies account for almost 25% of all specimens received. The age of predilection of cancers is between 50 and 60 years, and 61% of women with a high-grade lesion have a parity greater than 4. The frequency of cervical lesions is 43% for low-grade lesions, 20% for high-grade lesions, and 16% for invasive cancers. The most common type of cancer is squamous cell carcinoma.

**Conclusion:** Our study found that cervical cancer is more than just a problem; it is now a public health emergency in Haiti. Of every 100 cervical biopsies examined, 16 had invasive cancer. In view of the importance and impact of this disease, the fight against cervical cancer should be the priorities of Haiti’s health policy.

**Cervical Low-Grade Mucinous Cystic Tumor With Pseudomyxoma Peritonei: Case Report**

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**Breast Cancer in Thailand: A Comprehensive Histopathological Study of Buddhist and Muslim Women**

Judy Pang, MD,1 Cody Carter, MD,1 Shama Virani, PhD,1 Katie Zarins,1 Kali Deovery,1 Ana Khazan,1

Cancers in Childhood and Young Adults in Calabar, Nigeria (2009-2013)

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**Objectives:** To ascertain the impact or otherwise of the HIV/AIDS pandemic on the pattern of cancers in children and adolescents in Calabar, Nigeria, during the post-antiretroviral period, 2009 to 2013.

**Methods:** Data from the Calabar Cancer Registry for the period, 2009 to 2013, will be reviewed and only cancers in cases aged 0 to 19 years will be analyzed, the focus being mainly on the basis of diagnosis, age, sex, tumor morphology, and topography.

**Results:** Of the 719 new cancer cases reported over the 5-year period in Calabar, Nigeria, 7.8% were aged 0 to 19 years. Majority (61%) occurred in children aged below 10 years, while the remaining affected those aged 10 to 19 years. Slightly more males (55.4%) than females (44.5%) were affected. Lymphohematological cancers were commonest (41%), with Burkitt and Hodgkin lymphoma being the majority, affecting predominantly those aged 5 years and above. The eye was the second commonest site of malignancies in children and adolescents, with more females being affected, whereas more males had renal cancers. The HIV status of these patients was not known at the time of diagnosis.

**Conclusion:** There is a striking predominance of HIV/AIDS-defining cancers of the lymphohemopoietic system in the young children and adolescents in Calabar. Follow-up and monitoring of those receiving treatment and screening of all new cases for HIV infection will be required to determine their survival rates and compliance to the chemotherapeutic and antiretroviral drugs if HIV seropositive.