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# Histopahological Patterns of Premalignant and Malignant Gynecological Lesions at the Imo State University Teaching Hospital, Orlu, Nigeria: A 5 Year Review from 2010–2014.

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**Abstract:** ***Background: Gynecological lesions are a common reason for women to seek specialist care. There are a wide range of premalignant and malignant conditions for which surgical intervention is necessary. Histopathology is an important part of diagnosing and treating these lesions. Aim: This study set out to analyze the frequency of histopathologically evaluated premalignant and malignant lesions of the genital tract within a tertiary healthcare institution and by extension contribute to the existing database as well as to illustrate the role of histopathology in evidenced based gynecological practice. Materials and methods: This was a retrospective study of 102 cases of gynecological specimens sent for histopathology at the department of morbid anatomy that were confirmed to be either premalignant or cancerous, clinical data was also retrieved from the relevant case notes obtained from the medical records department of the Imo State University Teaching Hospital. All data were retrieved from records spanning the period of 1st January 2010 to 31st December 2014. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 20. Results: A total of 102 specimens were received during a 5 year. These lesions included cancer of the cervix of the invasive squamous variety in 51 cases (50%), cervical intraepithelial neoplasia was seen in 31cases (30.4%), cervical adenocarcinoma registered 7 cases (6.9%), choriocarcinoma accounted for 3 cases (2.9%), malignant ovarian lesions accounted for a total of 3 cases (2.9%) namely; ovarian granulosa tumors registered 2 cases (2.0%), while Burkitt's lymphoma had 1 case (1.0%). Conclusion: Invasive squamous cell cancer of the cervix was the most frequently encountered malignancy followed by precancerous cervical intraepithelial neoplasia (CIN).***

**Keywords:** Human papillomavirus, Malignant, Premalignant, Gynecological, Chemoradiation

## 1. Introduction

Gynecological lesions have a wide range of clinical features. The need for a thorough history, physical examination and laboratory evaluation cannot be overemphasized. However due to the fact that accurate diagnoses is the cornerstone of proper disease management, the need for histopathological analysis of post-operative specimens is thus essential [Dike et al, 2017].Pathology has the twin facets of being a medical specialty and an investigative scientific discipline. It is concerned with providing an understanding of the essential nature of human disease; anatomic pathology has a unique place in the practice of evidence based medicine [Crawford JM, 2007]. It helps draw an existential line between benign and malignant lesions, that is occasionally only possible using this technique to evaluate specimens [Attanucci CA et al, 2004].More so with premalignant and malignant lesions; these may not have any overt features especially in their early stages and hence may go undetected. Even those that are malignant may produce non-specific clinical signs and symptoms, a good example being ovarian cancers.Many ovarian tumors are asymptomatic in the early stages and are unfortunately diagnosed in the advanced state. The high mortality rate associated with ovarian cancer is due to its late detection, this has led some researchers to term it the "Silent Killer" [Jaffer Y et al, 2013].

Histopathology not only assists in diagnoses and deciding on treatment options but it also helps in the understanding of prevalence, as well as guiding prognostic projections by clinicians [Vinh-Hung V et al, 2007].

The purpose of the study was to add to the existing database on the histopathological patterns of premalignant and malignant diseases of gynecological origin.

## 2. Methodology

The study was done at the Imo State University Teaching Hospital, Orlu in Southeastern Nigeria. This was a retrospective study of 102 cases of gynecological specimens sent for histopathology at the department of morbid anatomy between the period of 1st January 2010 to 31st December 2014, in addition clinical data from the relevant case notes were obtained from the medical records department.

All the data were analyzed using SPSS version 20. The frequency of precancerous and cancerous tumors was calculated.

## 3. Discussion

The premalignant and malignant lesions made up 102 specimens (100%); these were diverse and included lesions of the cervix, uterus and ovaries. Invasive squamous cell carcinoma of the cervix was seen in 51 cases (50%). A study in northwestern Nigeria showed a similar trend with cervical cancer accounting for 69% of all gynecological cancers [Nnadi DC, 2014]. For these cases the mean age was 51.5

years SD 10.1, a study carried out in Port Harcourt, Nigeria showed cervical cancer was commonest between the ages of 50-69 years [Uzoigwe SA et al, 2004]. Other risk factors reported in these patients include poverty and low socio-economic status, grand multi-parity, limited educational attainment, early age at onset of sexual intercourse, polygamous marriages, and history of multiple sex partners [Ikechebelu JI et al,2010].All the affected51women in this study had evaluation with EUA and staging. Eight of these women benefitted from total abdominal hysterectomy; these were cases that were identified early at stage Ia and Ib, the other 43 were advanced cases [stages III and IV]; theywere referred for chemoradiation and palliative treatment. Cervical intraepithelial neoplasia (CIN) recorded 31 cases (30.4%), twenty eight of these were preceded by pap smears that revealed either low or high grade intraepithelial lesions. The remaining 3 were incidental findings. An extensive study of existing literature showed thatCIN diagnosis and treatment have a negative psychological impact on affected women [Frederiksen ME et al, .[2015

The importance of cervical cancer screening in developing countries like Nigeria where no national cervical screening guideline exists [Uzoma OI, 2016], this becomes more evident when the effect of such screening programs in reducing the prevalence of cervical cancer in countries like England, Japan and the USA. The fact that various studies show that this is the leading genital tract malignancy in developing nations goes further to buttress the need for robust screening programs [Dim CC, 2012] in such countries like Nigeria where the study was done. There are certain challenges to the old model of firstly identifying premalignant lesions during screening, a second visit would then be required for colposcopy, followed by a third visit to collect the biopsy report and further visits may be required for treatment. Thus, at the very least a minimum of three visits are required resulting in loss to follow up [Sadan O et al, 2007]. This led to the development of the "See-and-treat" approach currently endorsed by the World Health Organization (WHO). A 'screen-and-treat' approach in which the treatment decision is based on a screening test and treatment is provided soon or, ideally, immediately after a positive screening test. This makes it possible for a single visit to identify and treat such precancerous lesions [Li ZG et al, 2009]. Available screening tests include a human papillomavirus (HPV) test, visual inspection with acetic acid (VIA), and cytology (Pap test). Available treatments include cryotherapy, large loop excision of the transformation zone (LEEP/LLETZ), and cold knife conization [WHO, 2013]. One of the main criticisms of the "See-and-treat" approach is the risk of unnecessary overtreatment. A study done in the Netherlands that identified over 3,000 women who had undergone the "See-and-treat" approach concluded that overtreatment rate is low for patients with both a high-grade smear result and a high-grade colposcopic impression; thus lending credence to this single visit approach [Bosgraaf RP et al, 2013]. In addition WHO, United Nations Populations Fund (UNFPA), International Union Against Cancer (UICC), International Federation of Gynecologists and Obstetricians (FIGO) and other organizations that influence public health policies globally have unanimously endorsed HPV vaccines as an effective cancer prevention option [Basu P et al, 2013]. Seven cases of cervical adenocarcinoma were also seen in this study.

Three cases of choriocarinoma were seen; this gestational trophoblastic neoplasia (GTN) is malignant howeverearly stage GTN disease is often cured with single-agent chemotherapy. In contrast, advanced stage disease requires multiagent combination chemotherapeutic regimens to achieve a cure [May T et al, 2011]. All 3 cases were early stage and had complete remission with chemotherapy using sequential methotrexate therapy.

Ovarian malignancies are complicated by their lack of specific symptoms, the absence of a reliable screening test and as such late presentation [Rauh-Hain AJ et al, 2011]. Ovarian Granulosa cell tumors of the ovaries were seen in 2 cases; these are relatively uncommon ovarian tunors and are sex cord-stromal in origin, they represent just 3% of ovarian tumors but they tend to have a good prognosis when compared to the more common epithelial ovarian tumors [Sekkate S et al, 2013]. Both patients had hysterectomy, bilateral salpingo-oopherectomy with optimal resection, infracolic omentectomy and multiple biopsies taken. Only one returned for adjuvant chemotherapy with paclitaxel and carboplatin; after 3 cycles of treatment the patient failed to complete chemotherapy and no further follow up visits were made. Burkitts lymphoma had 1 case (0.3%), although relatively rare in adults, Burkitt lymphoma constitutes more than 40% of pediatric non-Hodgkin lymphomas [Onimoe GI et al, 2011]. The patient see in this study was 15 years old.

## 4. Conclusion

Invasive squamous cell cancer of the cervix was the most frequently encountered gynecological malignancy. There is a pressing need for the implementation of a National screening program in order to reduce the prevalence of cervical malignancies. HPV vaccination is equally an essential factor in this direction.

## 5. Conflict of Interest

The authors have no conflict of interest.

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