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Original Article

Epithelial malignancies of Endometrium: 2 years experience at Fatima Memorial Hospital

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KEY WORDS:

ABSTRACT

Objective: Rapidly accumulating sophisticated information highlights the fact that differential diagnosis of endometrial hyperplasia and well-differentiated endometrioid adenocarcinoma is complicated not only by the resemblance of these lesions to each other, but also by their tendency to be misdiagnosed. Detailed comprehension of rules and pitfalls in the grading of endometrioid adenocarcinomas and the estimation and reporting of myometrial invasion is of substantial importance to have a better understanding of issue. **Study design:** A cross- sectional study**. Duration of study:** Two years. **Place of study:** Departments of Pathology, Fatima Memorial Hospital. **Methods:** The study consisted of 27 specimens of endometrial tumors, received fixed in 10% formalin. Haematoxylin and Eosin stained slides were examined to determine the histological type by WHO classification, and immunohistochemistry was done in difficult cases. **Results:** Majority of these tumors were endometriod adenocarcinomas, Serous tumors 1 clear cell carcinoma 1 and one case of squamous cell carcinoma in situ. In one cases there is simultaneous tumor in ovary and endometrium. 2 cases have tumor both in cervix and endometrium. **Conclusion**: Detailed and accurate analysis of patients' tissue as 'deeply' as possible is necessary to obtain information on morphological background to provide the clinicians with information relevant for individualized medicine.

Introduction

It is becoming increasingly clear that solid tumours show considerable histological and functional heterogeneity. Data obtained through high throughput technologies has started to shed light on the fact that genetic lesions have a major role in determining tumour phenotype, but evidence is also accumulating that cancers of distinct subtypes within an organ may derive from different 'cells of origin'. Endometrial cancer comprises a heterogeneous group of tumors and research over the years has deepened our understanding of the contribution of distinct risk factors, clinical presentation, histopathological features and molecular characteristics in cancer progression. Knowledge of the molecular pathology of the two types of endometrial carcinoma—type I (endometrioid) and type II (non-endometrioid) has increased exponentially and this information is gradually being incorporated into clinical decision-making.

Endometrial cancer arises from the lining of the uterus. It is the fourth most common malignancy among women in the United States, with an estimated 49,500 new cases and 8,200 deaths in 2013[1]. Endometrioid adenocarcinoma is composed of malignant glandular epithelial elements; an admixture of squamous metaplasia is not uncommon. Clear cell and papillary serous carcinoma of the endometrium tumors are histologically similar to tumors observed in ovary and the fallopian tube and the prognosis is worse for these tumors[2]. Mucinous, squamous, and undifferentiated tumors are rarely encountered. Endometrioid (75%–80%), Uterine papillary serous (<10%), Clear cell (4%), Squamous cell (<1%). Mixed (10%)[3].

In this study we use combinatorial approach to study different types of epithelial malignancies in endometrium.

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Materials and Methods

All the endometrial biopsies and the hysterectomies specimens received in the last 2 years were retrieved from the hospital records and evaluated for the diagnosis and types of epithelial malignancies.(Table 1) types of different specimen received (Table 2) FIGO grading of the tumors (Table3) and additional findings (Table 4) were also recorded

Results

Table 1: Sub categorization of tumors.

Type of Malignancy	No. of Cases
Endometrioid adenocarcinoma	21 + 01*
Clear cell carcinoma	01**
SCC in situ	01**
Serous Carcinoma	01
Poorly differentiated carcinoma	02 + 01**

*Simultaneous ovarian tumor ** Simultaneous cervical tumor

Table 2: Types of specimens received

Type of Specimen	No. of Cases
Endometrial Curettings	10
TAH & BSO	11
TAH	02
Pipelle	05

Table 3: Grading of the endometrial tumors.

Histological Grade	No. of Cases
FIGO Grade I	10
FIGO Grade II	09
FIGO Grade III	02
Not graded	01*
TOTAL	22

Table 4: Additional findings in endometrial biopsies

Additional Findings	No. of Cases
Hyperplasia	07 (Atypical = 06)
Endometrial polyp	01
Squamous metaplasia	01
Leiomyomata	02

Discussion

Indeterminate or intermediate histologic features are major determinants which result in misidentification of tissue specimen and thus assignment to the uncertain category. There is considerable confusion in the literature as to where complex atypical endometrial hyperplasia ends and endometrial adenocarcinoma starts and it seems relevant to mention that immunohistochemistry can also be helpful, if interpreted in the right context in reaching a correct diagnosis. Following marker are being studied for their potential value in differential diagnosis P16, WT1, PTEN , PAX 2 , P53, Mamoglobin etc[4,5.]

There is a conflicting data regarding appraisal of foci of back-to-back arrangement of glands or foci of cribriform arrangement of glands smaller than 2.1? mm in diameter as hallmark features for for the diagnosis of endometrial adenocarcinoma[6]. In contrast serous carcinomas typically exhibit irregular, branching papillae with budding small papilla. Tha neoplastic cells show large pleomorphic nuclei[6,7]. At times its is difficult to make a correct diagnosis if predominant histologic pattern deviates from normal morphology[8].

There are also probabilities of misinterpretation and thus misidentification of Endometrial serous carcinoma with predominant glandular component as endometriod adenocarcinoma.[9] . Most important clue to diagnosis is extreme discordance of architectural and cytological features.Other important features are lack of polarity pseudostratification, striking pleomorphism, brisk mitosis and single cell apoptosis, feature which are absent in endometriod adenocarcinomas [9].If adequetly sampled typical morphology is usually encountered.

In 4 of our case we were unable to diagnose these on morphology alone. In one case where the sample was limited and morphology was not helpful and also showed some glandular pattern. In these case we used immunohistochemical markers P53 ,WT1and ERand PR. P53 showed strong diffuse staining in one of the case which is typically associated with serous carcinoma[10].

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