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MALIGNANT SURFACE OVARIAN EPITHELIAL TUMORS: A PROSPECTIVE ANALYSIS

Pathology

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ABSTRACT

Introduction: Ovarian cancer accounts for 3% of all cancers in females. About 80% of these are benign, and they occur mostly in young women between 20 and 45 years. Borderline tumors occur at slightly older ages while incidence of malignant tumors increases with age, occurring predominantly in perimenopausal and postmenopausal women. About 190,000 new cases and 114,000 deaths from ovarian cancer are estimated to occur annually worldwide. The aim of the study was to evaluate Malignant surface ovarian epithelial tumors in a tertiary referral centre.

Material and methods: This was a hospital based cross sectional observational study conducted for one year from 1st June 2019 to 31st May 2020 in the Department of Pathology, Indira Gandhi Medical College, Shimla.

Results: 28 out of total 32 malignant cases were graded according to "two tier grading system" as low- and high-grade tumors. Among graded malignant tumors 23(82.1%) were high grade while 5(17.9%) were low grade tumors. Majority of serous carcinomas (21/23) and all the other cases of endometroid carcinoma, mucinous carcinoma, malignant Brenner tumor and clear cell carcinoma were more than 40 years of age. On histological examination, majority of epithelial ovarian tumors were benign 38 (50%) followed by malignant 32 (42.1%) and borderline tumors 6 (7.9%).

Conclusion: Malignancy of ovarian cancer is high.

KEYWORDS

ovarian tumors, benign, malignant, clinical profile

INTRODUCTION

In developed countries, ovarian cancer is a commonly occurring neoplasm, ranking the 7th and 6th most frequent position for incidence and mortality, respectively [1]. High- incidence areas are Europe and North America, making it an important public health issue.[2]

Epithelial ovarian tumors are thought to arise from the surface epithelium (mesothelium) of the ovary.[3] Most early-stage ovarian cancer produces no symptoms, and therefore most of the patients present with advanced disease, making prognosis poor. So far, pathologists have devoted very little attention to early ovarian cancer originating in a coexisting benign epithelial lesion.[4] The precise origin of this epithelium is controversial; one hypothesis argues that the mesothelium lining of the ovarian surface undergoes a Müllerian metaplasia; another one that the same epithelium is derived from the fallopian tube or uterus via passive transport.[5] Majority of the ovarian cancers are epithelial cancers.

Surface epithelial-stromal tumors are a class of ovarian neoplasms that may be benign or malignant. Neoplasms in this group are thought to be derived from the ovarian surface epithelium (modified peritoneum) or from ectopic endometrial or Fallopian tube (tubal) tissue.

The present study was undertaken to profile malignant surface ovarian epithelial tumors.

METHODS

This was a hospital based cross sectional observational study conducted for one year from 1st June 2019 to 31st May 2020 in the Department of Pathology, Indira Gandhi Medical College, Shimla. All the surface epithelial ovarian tumors were included in the study.

Data were presented as frequency and percentages.

RESULTS

Tumor type

On histological examination, majority of epithelial ovarian tumors were benign 38 (50%) followed by malignant 32 (42.1%) and borderline tumors 6 (7.9%).

Distribution of malignant tumors

28 out of total 32 malignant cases were graded according to "two tier grading system" as low- and high-grade tumors. Among graded malignant tumors 23(82.1%) were high grade while 5(17.9%) were low grade tumors.

Age wise distribution of malignant tumors

Majority of serous carcinomas (21/23) and all the other cases of endometroid carcinoma, mucinous carcinoma, malignant Brenner tumor and clear cell carcinoma were more than 40 years of age. Oldest patient in our study was 90 years of age diagnosed with low grade endometroid carcinoma. Twenty out of 32 patients with malignant tumors were pre-menopausal. Rest 12 patients were post-menopausal (Table 1).

Table 1: Age wise distribution of malignant tumors.

	21-39 years		40-59 years		≥60 years	
Type of tumor	No. of cases	%	No. of cases	%	No. of cases	%
Serous carcinoma	2	6.25	16	50	5	15.6
Mucinous carcinoma	-		2	6.3	1	3.1
Malignant Brenner tumor	-		1	3.1	-	
Endometroid carcinoma	-		2	6.3	2	6.3
Clear cell carcinoma	-		-		1	3.1
Total	2	6.3	21	65.6	9	28.1

DISCUSSION

In our study twenty-eight out of total 32 malignant tumors were graded according to "two tier grading system" as low- and high-grade tumors. High grade was assigned to 82.1% tumors and low grade to 17.9% tumors.

Mohamed et al. (2020) also observed high grade tumors to be more common (56.5%) in their study subjects whereas Kumar et al. (2019) found equal percentage of high- and low-grade tumors (50% each) in their study of 26 cases. Both these studies were in accordance with the present study.

CONCLUSION

Malignancy among ovarian cancer is common.

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