



## OVARIAN CANCER: EPIDEMIOLOGICAL STUDY IN WESTERN MAHARASHTRA

### Genetics

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### ABSTRACT

**INTRODUCTION:-** In India, during the period 2004-2005, proportion of ovarian cancer varied from 1.7% to 8.7% of all female cancers in various population. With increasing life expectancy, there is increase in incidence of ovarian cancer. Therefore, an understanding of epidemiologic and genetic factors of ovarian cancer is important information for prevention, screening, early diagnosis and control of disease. Present study is to present the characteristics of ovarian cancer in patients present in Western Maharashtra

**Material and Methods:** Present epidemiological study of ovarian cancer is retrospective, descriptive type, carried out at Department of Obstetrics and Gynecology, of Medical Colleges in western Maharashtra.

**RESULTS AND DISCUSSION:-** In our study, the proportion of ovarian malignancy cases was 4.82% of all gynecological malignancies. Ovarian cancer incidence rates reported from countries with nationwide cancer registration and those from more developed countries are generally similar to each other. In less developed countries and regions, ovarian cancer rates are relatively lower, and this is likely due in part to the lack of quality data from large portions of the population in these countries.

**CONCLUSIONS-**Ovarian cancer has emerged as one of the commonest malignancy affecting women in western Maharashtra. Efforts should be made to detect the disease at early stage through population education with respect to epidemiological factors.

### KEYWORDS

Ovary, Epidemiology, Carcinoma

### INTRODUCTION:-

Ovarian cancer is a commonly diagnosed and particularly deadly gynecologic malignancy worldwide. The risk that an ovarian tumor is malignant also increases with age, with an overall risk of 13 percent in premenopausal women and 45 percent in postmenopausal women. Ovarian cancer mortality increases with age, with the greatest increases beginning at 35 years of age, ovarian cancer ranks third in frequency among the four female gynecologic cancers. Ovarian cancer accounts for almost 4 percent of all cancers Diagnosed among women each year.

In India, during the period 2004-2005, proportion of ovarian cancer varied from 1.7% to 8.7% of all female cancers in various population based registries of Indian Council of Medical Research. The Age Specific Incidence Rate (ASIR) for ovarian cancer revealed that the disease increases from 35 years of age and reaches a peak between the ages 55-64.

But due to detection in late stages of disease the recurrence is common and eventually death follows. With increasing life expectancy, there is increase in incidence of ovarian cancer. Therefore, an understanding of epidemiologic and genetic factors of ovarian cancer is important information for prevention, screening, early diagnosis and control of disease.

Present study is to present the characteristics of ovarian cancer in patients present in Western Maharashtra

### Material and Methods:

Present epidemiological study of ovarian cancer is retrospective, descriptive type, carried out at Department of Obstetrics and Gynecology, of Medical Colleges in western Maharashtra. 100 cases of ovarian malignancy were studied. All cases were diagnosed based on clinical findings, supported by imaging consisting of ultrasound, CT scan, and MRI. The diagnosis was confirmed on histopathology.

### RESULTS:

Among the 100 cases of ovarian malignancy, Majority of ovarian malignancies were primary epithelial tumors.

**Table 1: Age wise distribution of ovarian malignancy at various stages.**

stage	Total number of cases	Mean age
Stage1	11	43
Stage 2	25	46
Stage3	30	47
Stage 4	44	53

### DISCUSSION:

In our study, the proportion of ovarian malignancy cases was 4.82% of all gynecological malignancies. Ovarian cancer incidence rates reported from countries with nationwide cancer registration and those from more developed countries are generally similar to each other. In less developed countries and regions, ovarian cancer rates are relatively lower, and this is likely due in part to the lack of quality data from large portions of the population in these countries. This increase may be a result of an increased lifespan due to advances in medical treatment in these countries, as well as the adoption of Western patterns of diet, physical activity, and tobacco use (Thun et al., 2011).

Several factors, including genetic, reproductive, hormonal and behavioral factors have been suggested to increase risk for ovarian cancer. Genetic factors perhaps have the strongest and most consistent association with increased risk for ovarian cancer.

Hereditary ovarian cancers have distinct patterns from Sporadic ovarian cancers. Many are diagnosed at younger ages and less advanced stages than sporadic ovarian cancers (Prat et al., 2005)<sup>2</sup>. Regarding reproductive factors, studies .Over several years have consistently associated nulliparity with increased risk of ovarian cancer (Risch et al, 1994; Vachon et al., 2002)<sup>3</sup>. Hysterectomy and tubal ligation have been consistently associated with conferring a decreased risk for ovarian cancer. Oral contraceptive use has been suggested to decrease risk for ovarian cancer, while post-menopausal hormone replacement therapy use is suggested to increase risk for ovarian cancer. However, conclusions from hormonal studies have generally been less consistent and more difficult to interpret than genetic and reproductive factor studies. Although some studies have shown a protective effect of oral Contraceptives on ovarian cancer

(Beral et al., 2008)<sup>4</sup>.

This increasing trend may reflect increased exposure to risk factors or due to increased awareness and increase in proportion of elderly women. Age has a strong correlation to ovarian cancer risk and 80% cases are diagnosed after 50 years of age. Advancing age increased the possibility of malignant transformation. (Murthi et al)<sup>5</sup> reported that the disease increases from 35 years of age and reaches a peak between the ages 55-64.

There is improvement in survival rates in early stage disease due to advancement in chemotherapy and surgery but unfortunately majority of the patients report in late stage.

#### CONCLUSIONS-

The etiology and natural history of ovarian cancer are poorly understood. Incidence rates from countries with high-quality data should continue to be analyzed with respect to Histology and stage variation, as these types of analyses may provide clues to the pathogenesis of the disease.

Ovarian cancer has emerged as one of the commonest malignancy affecting women in western Maharashtra. Efforts should be made to detect the disease at early stage through population education with respect to epidemiological factors.

Currently, a major goal of ovarian cancer research is to develop an effective test that can detect the disease at its earliest stages, which would ultimately result in decreased mortality.

Further studies are needed to elicit the causative factors responsible for the increase in the incidence of the disease and also their mechanism of action. Most ovarian cancers are environmental in origin and therefore in principle preventable.

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