OPEN ACCESS Freely available online

Journal of Carcinogenesis & Mutagenesis

Commentary

A Brief Note on Ovarian Cancer

Yun Hasan*

Department of Cancer, Care Hospital, New York, United States

DESCRIPTION

Ovarian cancer is a type of cancer that develops in or on the ovary. This causes aberrant cells to form that can invade or spread to other sections of the body. There may be no or only sporadic symptoms when this process begins. As the cancer advances, the symptoms become more evident. Bloating, pelvic pain, abdominal swelling, constipation, and loss of appetite are some of the symptoms that might occur. The lining of the abdomen, lymph nodes, lungs, and liver are all common places where cancer can spread.

Women who have ovulated more frequently throughout their lives have a higher risk of ovarian cancer. Those who have never had children, those who begin ovulation at a younger age, and those who reach menopause at a later age all fall under this category. Hormone therapy after menopause, reproductive medicine, and obesity are all risk factors. Hormonal birth control, tubal ligation, and breastfeeding are all risk-reducing measures. Inherited genetic risk accounts for roughly 10% of cases; women with mutations in the BRCA1 or BRCA2 genes have a 50% probability of acquiring the disease.

The most frequent type of ovarian cancer is ovarian carcinoma, which accounts for more than 95% of all occurrences. Ovarian carcinoma is divided into five subtypes, the most frequent of which is High-Grade Serous Carcinoma (HGSC). The cells that surround the ovaries are thought to be the source of these ovarian tumours, while some may grow in the Fallopian tubes. Germ cell tumors and sex cord stromal tumours are two less prevalent kinds of ovarian cancer. A sample of tissue, which is normally removed after surgery, confirms the diagnosis of ovarian cancer.

Screening is not suggested for women who are at average risk because there is no evidence that screening reduces mortality, and the high percentage of false positive testing may lead to unnecessary surgery, which has its own dangers.

Those who are at extremely high risk may have their ovaries removed as a precaution.

Ovarian cancer is often treatable if detected and treated early. Surgery, radiation treatment, and chemotherapy are generally used in combination to treat cancer. The severity of the disease, the type of cancer present, and other medical factors all influence the outcome. In the United States, the overall five-year survival rate is 49%. In the underdeveloped world, the outcomes are even worse. In 2012, around 239,000 women were diagnosed with new cases. In 2015, it was found in 1.2 million women worldwide, resulting in 161,100 fatalities. It is the seventh most frequent malignancy in women and the eighth most common cause of cancer mortality.

The average age of diagnosis is 63 years old. In North America and Europe, ovarian cancer deaths are more common than in Africa and Asia.

Early symptoms

Ovarian cancer symptoms can be absent or modest in the early stages. Symptoms are usually present for several months before they are detected and diagnosed. Irritable bowel syndrome symptoms can be misdiagnosed. Ovarian cancer is usually painless in its early stages. Symptoms differ depending on the subtype. Low malignant potential (LMP) ovarian tumours, also known as ovarian borderline tumors, do not induce an increase in CA125 levels and are not detectable with ultrasonography. Abdominal distension and pelvic discomfort are common signs of an LMP tumour. Large masses, in particular, are usually benign or borderline.

Bloating, abdominal or pelvic pain or discomfort, back pain, irregular menstruation or postmenopausal vaginal bleeding, pain or bleeding after or during sexual intercourse, loss of appetite, fatigue, diarrhoea, indigestion, heartburn, constipation, nausea, feeling full, and possibly urinary symptoms are some of the most common symptoms of ovarian cancer (including frequent urination and urgent urination).

If ovarian torsion occurs, the expanding mass may cause pain. A mass pressing on the other abdominopelvic organs or metastases can produce symptoms. Ovarian cancer is examined if these symptoms begin to occur more frequently or strongly than

Correspondence to: Yun Hasan, Department of Cancer, Care Hospital, New York, United States, E-mail: hasan@gmail.com

Received: November 22, 2021; **Accepted**: December 06, 2022; **Published**: December 13, 2021

Citation: Hasan Y (2021) A Brief Note on Ovarian Cancer. J Carcinog Mutagen. 12:374.

normal, especially if there is no major history of such symptoms. A Sister Mary Joseph nodule can be caused by metastases.

Teratomas can produce peritoneal gliomatosis or developing teratoma syndrome in rare cases. After menopause, some women develop menometrorrhagia and irregular vaginal bleeding. Hirsutism, abdominal pain, virilization, and an adnexal lump are all prevalent symptoms.

Children Symptoms of ovarian tumors in adolescents and children include severe stomach discomfort, peritoneal irritation, and bleeding. Sex cord-stromal tumor symptoms release hormones that can influence the development of secondary sex characteristics. Early puberty may develop sex cord-stromal tumors in prepubertal children; stomach discomfort and distension are also common. Amenorrhea can occur in adolescents with sex cord stromal tumors. The malignancy might produce an accumulation of fluid in the abdomen as it progresses.
If the cancer has not been detected by the time it develops ascites, it is usually detected soon after. Abdominal tumors, lymph node masses, and pleural effusion are all symptoms of advanced malignancy.

Factors that are at risk

The length of time spent ovulating is linked to ovarian cancer. As a result, not having children is linked to an increased risk of ovarian cancer, owing to the fact that pregnancy suppresses ovulation. Ovulatory cycles persist when cells are constantly stimulated to divide during ovulation. As a result, persons who have never had children are twice as likely to get ovarian cancer as those who have. Early first menstruation and late menopause cause a longer period of ovulation, which is a risk factor. Obesity, as well as hormone replacement therapy, increases the risk.

Women who have fewer menstrual cycles, no menstrual periods and breastfeed, use oral contraceptives, have many pregnancies, and have a pregnancy at a young age have a lower risk of developing ovarian cancer. Women who have had tubal ligation also known as "tube tying"), both ovaries removed, or hysterectomy have a lower risk of getting ovarian cancer an operation in which the uterus, and sometimes the cervix, is removed). A person's age can also be a risk factor.

Hormones

Fertility drugs may lead to the development of ovarian borderline tumors, however the link is contested and difficult to examine. Fertility medicines have been linked to an increased incidence of borderline tumors.

Those who have been treated for infertility but remain nulliparous have a higher risk of epithelial ovarian cancer than those who have been effectively treated for infertility and then given birth. This could be linked to precancerous cells shedding during pregnancy, but the origin is unknown. Instead of the treatment, it's possible that infertility is the risk factor. Ovarian cancer is linked to hormonal diseases such polycystic ovary syndrome and endometriosis, but the link isn't totally proven.

Hormone Replacement Therapy (HRT) using oestrogen after menopause is thought to increase the risk of ovarian cancer. Although the link has not been proven in a large-scale investigation, prominent studies such as the Million Women Study have backed it. Postmenopausal HRT with combined estrogen and progesterone may increase contemporaneous risk if used for over 5 years, but this risk returns to normal after cessation of therapy. Estrogen HRT with or without progestins increases the risk of endometrioid and serous tumors but lowers the risk of mucinous tumors. Higher doses of estrogen increase this risk. Endometriosis is another risk factor for ovarian cancer, as is pain with menstruation. Endometriosis is associated with clear-cell and endometrioid subtypes, low-grade serous tumors, stage I and II tumors, grade 1 tumors, and lower mortality.