"WOMEN AT HIGH RISK FOR OVARIAN CANCER SHOULD BE OFFERED ULTRASOUND AND CA 125 TESTING EVERY SIX MONTHS. IT IS IMPORTANT TO COUNSEL THESE WOMEN CAREFULLY ABOUT THE LACK OF EFFICACY IN PRESENT DAY TESTING"

CRITICAL MASS

Gynaecological oncologist *Annekathryn Goodman MD*, discusses the symptoms, treatment options and the possible use of alterative therapies when treating ovarian cancer

ONE IN 70 WOMEN will develop ovarian cancer during their lifetime. Among gynaecologic cancers, ovarian cancer is the most deadly. In Europe and North America, more women die from ovarian cancers than from cervical and endometrial cancers combined. In the Middle East as in North America, ovarian cancer is one tenth as common as breast cancer, comprising 3-4 % of cancers reported to tumour registries.

In many parts of the Middle East, 50% of the population is under 50 years of age. Cancer statistics may change as this population ages. At this time, there are no effective techniques that reduce the disease specific mortality of ovarian cancer.

Ovarian cancer usually metastasizes in one of two ways. In the majority of cases, the cancer spreads when abnormal ovarian surface tissue sheds into the abdomen. This typically occurs before the ovaries are enlarged. In other cases, ovarian cancer grows in multiple places at the same time in the abdomen. At least 7-10 % of all advanced ovarian cancers are peritoneal primary cancers.

Most ovarian cancers occur in women over 50 years of age. There is also a definite difference between the risks of occurrence in various countries, which may suggest one or more environmental or dietary influences.

Patients of low parity, decreased fertility, and delayed childbearing are at greatest risk if they have not been using oral contraceptives. The use of oral contraceptives, however, has been found to decrease the risk of epithelial ovarian cancer in patients aged 40 to 59 years.

There appears to be a familial predisposition to the development of ovarian cancer in a minority of patients. One or more first-degree relatives with ovarian cancer confer as much as a 50 % risk of developing ovarian cancer in some families. About 10 % of ovarian cancers are associated with a mutation in the BRCA 1 and 2 genes.

Most patients present with advanced stage disease. Only 30% of women with ovarian cancer are identified at a time when the cancer is confined to the ovaries. The five-year survival for women with advanced stage ovarian cancer ranges from 5 to 20%.

SYMPTOMS AND SCREENING

While there are no early symptoms of ovarian cancer, the most frequently encountered late symptoms include intestinal distress with heartburn, increased crampy abdominal pain, and change in bowel habits. Increased abdominal girth, early satiety, urinary frequency, and shortness of breath will be seen in patients who have pleural effusions or massive ascites.

Unfortunately, there is no effective mass-screening tool for the detection of ovarian cancer. Possible screening tools that have been extensively studied include physical examination, cytology, imaging studies, and tumour markers.

Several tumour markers have been studied with greatest scrutiny devoted to CA 125. Elevated CA 125 levels have been reported in more than 80% of women with ovarian cancer. Serum levels of this marker are used to track the clinical course of this disease. In early stages, CA 125 is only elevated in about 50% of cases. Serial CA 125 values that steadily rise are suspicious for a malignant process.

Ultrasound has become a commonly used technique, with approximately 90% accuracy in detecting and localising pelvic masses. It will not distinguish between benign and malignant disease with acceptable accuracy.

RECOMMENDATIONS

Women at high risk for ovarian cancer should be offered ultrasound and CA 125 testing every six months. It is important to counsel these women carefully about the lack of efficacy in present day testing. While some studies suggest that close testing will pick up cancers at an earlier stage, other studies have not confirmed this finding.

Oral contraceptives have been shown in large population series to reduce the risk of developing ovarian cancer by 50%. Prophylactic oophorectomy is the leading intervention for risk reduction even with the continued risk of peritoneal cancer. Because evaluation of families with BRCA gene mutations has shown a risk of fallopian tube cancer, prophylactic surgery should always involve the removal of the fallopian tubes as well.

TREATMENT AND SIDE EFFECTS

Ovarian cancer is treated first by cytoreductive surgery followed by chemotherapy. The patient's prognosis is directly dependent on the ability of the surgeon to reduce the residual disease to less than 1cm. This involves the removal of the uterus, fallopian tubes, ovaries, omentum, appendix, pelvic and para-aortic lymph nodes, and pelvic peritoneum. Frequently small and large bowel resections are part of optimal cytoreduction in advanced disease. For tumours that appear to be confined to the ovaries, careful staging biopsies must be performed. Some 20% of stage I cancers are upstaged after lymph node biopsies. Many reports show a survival advantage for women who have had their surgery performed by gynaecologic oncologists. An operation by a gynaecologic oncologist results in a 25% lower death rate at three years than an operation by a general gynaecologist or general surgeon. Platinum-based combination chemotherapy must be instituted within two to four weeks of surgery to prevent tumour cell regrowth.

At the Massachusetts General Hospital (MGH), women receive six to eight cycles of chemotherapy. The whole treatment experience takes an average of six months. Following the completion of therapy, women are examined every three months and are evaluated for recurrent cancer.

Top
Dr Goodman performs acupuncture on a cancer patient at the Massachusetts General Hospital
Photographer: Jeanne Nevard

Above and left
Dr Goodman removes an ovarian tumour at Massachusetts General Hospital

■ **Dr Goodman is associate director of the Gynaecology Oncology Department at Massachusetts General Hospital in Boston, US**

Women with ovarian cancer struggle with a variety of psychological and physical symptoms. Women who are in remission from their cancers may commonly experience side effects from surgery and /or chemotherapy that are not crippling but can reduce the quality of their lives. These symptoms and interventions to alleviate them have been poorly studied. Symptoms include:

- Depression
- Sexual dysfunction
- Estrogen deficiency symptoms (hot flashes, insomnia, osteoporosis, vaginal dryness, urinary frequency)
- Arthalgias
- Neuropathy
- Alterations in skin sensation
- Chronic bowel changes (constipation, diarrhoea)
- Chronic bladder changes (bladder atony)
- Lower extremity lymphedema
- Incisional hernia
- Discomfort from scar
- Pain syndromes

THE ACUPUNCTURE CLINIC AT MGH

Modern medicine does not yet offer effective solutions for the treatment of these symptoms and problems. Standard narcotic medications have many negative side effects including sedation, fuzzy thinking, constipation, and the potential for addiction. As a result, Massachusetts General hospital (MGH) is developing an acupuncture clinic for women with cancer.

Best known in the treatment of pain syndromes, acupuncture has been shown to be very helpful for the treatment of depression, gastrointestinal complaints, and fatigue. The clinic offers acupuncture to women undergoing chemotherapy. It also plans to systematically study the use of acupuncture in this setting by conducting long-term follow-up with symptomatic cancer survivors and with women who have active cancer issues.

Ovarian cancer can be a fatal disease. With aggressive surgery followed by chemotherapy, we can alleviate the symptoms of cancer and can prolong life. Although the overall statistics remain grim, there is emerging a subset of women who are surviving five to 10 years. While we work to improve survival rates, the international medical community must address the long-term consequences of cancer and its therapy. ■