Public Health

Ovarian cancer in Canada

Epidemiology

Ovarian cancer is the fifth most diagnosed cancer among Canadian women, accounting for 4% of all new cases. It is also the fifth leading cause of cancer-related death among women, accounting for almost 5% of the total. In 1999 there were about 2600 new cases and 1500 deaths due to ovarian cancer.[1] Incidence and mortality rates increase with advancing age.

More than 90% of ovarian tumours develop from the epithelial cells that form the surface of the ovary. Tumours spread when there is local shedding into the peritoneal cavity, followed by implantation into the peritoneum. The causes of ovarian cancer are poorly understood. It is estimated that 5% to 10% of all cases result from hereditary predisposition.[2] Hereditary breast–ovarian cancer (HBOC) syndrome is thought to account for 65% to 75% of hereditary ovarian cancers. About 75% of HBOC families are linked to one of the tumour suppressor genes, *BRCA1* and *BRCA2*.

Clinical management

Symptoms initially tend to be vague, but as the disease progresses they may include abdominal distention or pain, alterations in bowel or bladder habits, and gynecologic complaints such as pain during intercourse. Pelvic exams generally detect ovarian cancer that is at an advanced stage. Prognosis is largely determined by stage at diagnosis (Table 1). Accurate staging is required to determine appropriate treatment. Surgery is the primary treatment for women with localized (stage I) disease, although therapy such as chemotherapy may also be offered. Treatment of advanced ovarian cancer, such as surgical debulking, will largely delay symptomatic relapse.

Table 1: Stage of ovarian cancer at diagnosis and 5-year relative survival rate[3]

Stage	Distribution at diagnosis, % (1989–94)	5-year relative survival rate, %
Localized	25	95.3
Regional	9	79.4
Distant	61	27.7
Unstaged	6	29.4

Prevention

A number of reproductive factors potentially reduce the risk of ovarian cancer.[4–7] These include term pregnancy (estimated risk reduction of 40% with the first term pregnancy), breast-feeding (19% risk reduction with any breast-feeding), oral contraceptive use (34% risk reduction with any use) and tubal ligation (41% risk reduction). There is insufficient evidence to recommend prophylactic oophorectomy in women with hereditary predisposition; however, it has been suggested that women with a *BRCA1* mutation should be counselled about this option.[8]

Two screening tests that have been considered are the measurement of serum CA-125 and ultrasound. Serum levels of CA-125 are elevated in about half of patients with stage I disease and 90% of patients with stage II disease.[9] However, elevated levels can also occur with endometriosis, pregnancy and nongynecologic cancers. The use of ultrasound has been associated with a high number of false-positive results.[10]

Because there are no proven methods to detect precancerous lesions, the Canadian Task Force on Preventive Health Care and the US Preventive Services Task Force both recommend against screening asymptomatic women.[11,12] Results from 3 randomized controlled trials to evaluate the effectiveness of screening in the general population are expected by 2004.

Further information

Cancer Bureau, tel 613 957-0357, cancer_bureau@hc-sc.gc.ca, **www.hc-sc.gc.ca/hpb/lcdc/bc/updates**

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