IMPORTANCE OF EARLY DIAGNOSIS IN MANAGING OVARIAN CANCER

AUTHOR Ruth Dunleavey, BSc, RGN, is clinical research nurse, St Vincent’s Hospital, Sydney, Australia.


Because of diagnostic difficulties, ovarian cancer is a disease that is characterised by disappointing survival rates and a very real risk of relapse. This article highlights the importance of early diagnosis, risk factors and screening for ovarian cancer and outlines the treatment options that are available.

Contrary to widely held assumptions, a diagnosis of ovarian cancer is not necessarily a death sentence. With early detection (when the disease is confined to the ovaries or pelvic cavity) the chance of long-term remission is over 70%, with some studies putting it as high as 95% (Gershenson, 2002).

However, the major problem with ovarian cancer is that only one-fifth of cases are diagnosed in the early stages of the disease. Approximately one-third of women are diagnosed with ovarian cancer once they already have distant metastases.

In such cases the five-year survival rate is a discouraging 15%. This makes ovarian cancer the leading cause of death from gynaecologic cancer.

RISK FACTORS

The exact causes of ovarian cancer are unknown but a number of factors have been suggested to be of significance. The two most important of these are age and the presence of certain genetic mutations:

- **Age**: ovarian cancer is far more common among older, post-menopausal women with 85% of cases being diagnosed in women over 50 and the highest incidence among women aged 70 or more (Cancer Research Council, 2006).

- **Genetic factors**: the genes associated with ovarian cancer are the BRCA-1 and 2 genes, which are also implicated in familial breast cancer. If a patient is BRCA positive, then her lifetime risk of developing ovarian cancer increases to between 16% and 60% versus the general population’s risk of 1.7% (Brose et al, 2002).

SYMPTOMS

The symptoms associated with ovarian cancer are non-specific and easily passed off as insignificant. Not only may they be dismissed by patients but they can also be overlooked by primary health care physicians (Koldjeski et al, 2005). The most common symptoms associated with ovarian cancer include:

- Abdominal pain and bloating;
- Fatigue;
- Weight loss;
- Urinary symptoms.

TYPES OF OVARIAN CANCER AND STAGING

Ovarian masses are classified as simple, borderline neoplastic or neoplastic. Simple cysts are benign and account for 70 to 80% of tumours. Borderline neoplastic ovarian cysts have the potential to transform into malignant tumours and probably constitute fewer than 5% of tumours.

Malignant tumours account for up to 20% of ovarian tumours (Umemoto et al, 2006). Of these 90% are epithelial. These may be further subdivided into serous (40%), mucinous, endometrioid, clear cell and undifferentiated (Schrecengost, 2002), all of which are treated in the same way. Non-epithelial ovarian cancers include germ cell tumours (ovarian teratomas) and sarcomas, which are treated differently and are much less common.

DIAGNOSTIC TESTS

Ovarian cancer is difficult to diagnose. Although 80% of women with the disease have had symptoms for less than four weeks when they present at general practice (Kirwan et al, 2002), the interval time from the first presenting symptom to diagnosis is a lengthy 4.6 months.

If ovarian cancer is suspected a thorough physical and vaginal examination is performed, followed by a pelvic or vaginal ultrasound. Benign ovarian cysts are characteristically unilateral, mobile, smooth or cystic on palpation and hypoechoic on ultrasound. In contrast, a bilateral, solid, irregular and fixed mass alerts the clinician to a possible carcinoma, particularly if associated with rapid growth (Schrecengost, 2002; Umemoto et al, 2006).

To obtain a definitive tissue diagnosis a laparotomy will be required. Ultrasound or CT-guided needle aspiration procedures are not used in women with suspected malignancy because needle aspiration ruptures the capsule allowing cancer cells to spread to the peritoneal cavity (Schrecengost, 2002).

Ovarian cancer is also associated with a tumour marker – cancer antigen 125 (CA-125). While useful to monitor disease status in the follow-up setting, this test is less useful diagnostically as levels of CA-125 may be elevated by a number of other conditions such as endometriosis, pregnancy, liver disease or fibroids. Only 50% of women with stage one ovarian cancer have an elevated CA-125 (Edwards, 2003).

TREATMENT

Ovarian cancer requires the utilisation of aggressive surgical and medical protocols regardless of the stage of disease. Surgery is the primary therapy, generally in...
Surgery
Surgery is the treatment of choice in ovarian cancer and the only option for cure. The US has higher surgical rates for benign ovarian tumours compared with European countries, with at least 60,000 surgical excisions for benign ovarian masses occurring per year (Schrecengost, 2002).
In women who have completed their families or who are post-menopausal, it is recommended that the uterus, fallopian tubes and both ovaries are removed (Low et al, 2000), often with the omentum too. The opposite ovary is taken out because of the frequency of bilateral tumours. There is also a 43% possibility of occult metastases in the second, apparently normal ovary. A hysterectomy is indicated because the uterus may be a site for metastases. Furthermore, the prevalence of synchronous endometrial cancer is relatively high (Schrecengost, 2002).
Because ovarian cancer is frequently diagnosed only when it has reached an advanced stage, it is often very difficult to remove all the disease. In such cases, surgeons perform ‘debulking’ surgery, which means they take away as much tumour as possible. Debulking may be carried out prior to beginning chemotherapy or after the first few cycles. While thought to improve the efficacy of chemotherapy, the evidence to support this is questionable. Advocates of cytoreductive surgery claim that resection helps restore gastrointestinal function and improves immune system competence (Schrecengost, 2002). Studies are presently ongoing to assess its role.

Chemotherapy
Many women are given adjuvant chemotherapy after their surgery. Regimens vary but generally employ a platinum drug (carboplatin or cisplatinum), often in combination with a taxane (paclitaxel or docetaxel). After standard treatment with debulking surgery and chemotherapy, nearly 80% of women are expected to survive one year and 52% to survive five years (Jemal et al, 2002). Eighty per cent of women receiving treatment with platinum/taxane chemotherapy will experience a relapse and require second-line chemotherapy (Latorre et al, 2002).

Recurrence
Unfortunately most of the women with ovarian cancer diagnosed beyond stage one will experience a relapse within five years, and it is rare for women with progressive disease to survive beyond three years (Edwards, 2003). Recurrence is generally locoregional with the development of distant metastases being rare (Martin, 2005). The role of surgery may be useful for the relief of symptoms but as discussed above, chemotherapy is generally the treatment used in this setting.

Screening and prevention
There is no effective screening test for ovarian cancer at this time. The CA-125 test is not adequately specific and results in false positives and negatives. Routine pelvic imaging is similarly problematic, as it is difficult to distinguish between malignant and benign tumours by imaging alone.

The best measures that can currently be taken are to identify ‘at risk’ populations and exercise vigilance, especially concerning abdominal symptoms. For women known to have a genetic predisposition to ovarian cancer, prophylactic oophorectomy has been shown to be of some use (Schrecengost, 2002).

For more clinical information log on to nursingtimes.net and click on to NT Clinical and Archive

For more clinical information log on to nursingtimes.net and click on to NT Clinical and Archive

REFERENCES