

Ovarian Cysts in post-menopausal woman

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The incidence of ovarian cancer rises in the post menopausal women with the incidence going up from 6.6 per 100000 in 20 to 49 year olds to 26.8 per 100000 in the post-menopausal women. When examining a post-menopausal patient we are always thoughtful of a malignancy. Despite our best efforts, the 5 year survival of this disease has not changed in the past 30 years. Early cancers which are stage one have a much better out come with a 90% survival. Patients who have a first degree relative have a three times increased risk in developing an ovarian cancer and those who are carriers of BRCA gene mutations are at particular risk of developing ovarian cancer. 39 to 46% of patients with BRCA 1 mutation will in fact develop an ovarian cancer.

Survival can be improved by early diagnosis of ovarian cancer, so strategies for screening need to be assessed. The WHO has set out clear guidelines for the screening of diseases and unfortunately ovarian cancer does not fulfil many of their criteria. The condition is not a major cause of death and does not have a high prevalence in the general population. We also do not know what the natural history of the disease is and some ovarian cancers may arise denovo as stage 3 disease. We also do not have an effective method of treating overt disease that will significantly improve survival other than early detection and surgery. Screening modalities that are available are unfortunately not inexpensive and do not have a high sensitivity, specificity and high positive predictive value. If a good test had a positive predictive value of 10% then we would have to do 10 total abdominal hysterectomies and bilateral salpingo oophorectomy to find 1 ovarian cancer. A prophylactic bilateral oophorectomy in patients who have had surgery for benign disease has been shown to increase mortality from cardiovascular and other diseases. It should not be used as a means to decrease the incidence of ovarian cancer as this incidence is lower than the mortality from cardiovascular disease.

The screening modalities that are available are symptoms, tumour

markers, ultrasound and physical examination. Symptoms are vague and have a much lower sensitivity in early disease and in patients who are younger. The tumour marker Ca 125 is positive in patients with epithelial cancers of the ovary in 80% of patients with advanced disease. It is often not raised in early disease. If used over time and repeated, it may be more accurate than used as a single value. There are several other conditions that cause an elevation in a CA 125 (See Figure 1).

Figure 1

Fibroids	Malignancies
Endometriosis	lung
Menstrual cycle fluctuation	pancreas
Pelvic inflammatory disease	endometrial
Hepatitis	breast
Peritonitis	colon

Prior to the discovery of the Ca 125 the palpable ovary was used as a screening tool. It is estimated that a gynaecologist needs to examine 10 000 patients to find one ovarian cancer which is palpable. Some patients are obese making it difficult to do an adequate examination. Ultrasound is now freely available in most gynaecological offices. The transvaginal route has a higher sensitivity and specificity than transabdominal route. When doing a transvaginal ultrasound the Depriest morphological scoring system can be used to predict malignancy. (figure 2).

Figure 2:

Morphologic index for ultrasound identification of ovarian cancer

Variable	Morphologic index				
	0	1	2	3	4
Cyst-wall structure	Smooth <3mm thick	Smooth >3mm thick	Papillary projection <3mm	Papillary projection >3mm	Predominantly solid
Tumour volume	<10cm ³	10 to 50cm ³	>50 to 200cm ³	>200 - 500cm ³	>500cm ³
Septum structure	No septa	Thin septa	Thick septa 3-10mm	Solid area	Predominantly solid

This takes into account the cystic wall structure, tumour volume and the presence of septa. It then gives them a score from between 0 and 4 and a total score of greater than 5 is very suggestive of ovarian cancer. This together with the CA 125 and a score of 3 for the menopause can give one another scoring system called the risk of malignancy index. (figure 3). The role of Doppler imaging is inconsistent and its additional benefit is not proven. All of these apply specifically to epithelial ovarian cancers and unfortunately are not perfect and still miss cases of ovarian cancers.

colony oncologist for management. This is based on several trials that have shown that patients with ovarian cancer treated by a gynaecological oncologist has a better survival advantage than those treated by a generalist or general surgeon. The surgery should be performed through a longitudinal incision. The aim of the surgery is to debulk the tumour to less than 1cm of residual disease. This must include a total abdominal hysterectomy bilateralsalpingoophorectomy, omentectomy, washings and any other procedure that will allow for adequate debulking. This should be done in a centre that does these procedures regularly and by the appropriate surgeon.

Ideally all post menopausal women should have a transvaginal ultrasound and should a mass be identified then a morphological scoring system with ca 125 should be done. This would give one an indication of whether or not it can be treated conservatively. The role of laparoscopy is controversial and should be reserved for patients if one is not certain about the potential for malignancy. Should a malignancy be

found then the patient needs to be counselled that one would proceed to laparotomy. There is no role for fine needle aspiration of the mass as this changes the stage and prognosis for the patient should the mass be malignant. This should only be reserved for patients whom are not fit for surgery and a diagnosis needs to be made in order to consider chemotherapy.

Ovarian cysts in the menopause are not uncommon and need to be managed appropriately.

References on request.

Figure 3:

$RMI = U \times M \times CA125$

U = 0 for ultrasound score of 0, U = 1 for ultrasound score of 1.

U = 2 for ultrasound score of 2-5

M = 3 for all postmenopausal women dealt with by this guideline

CA125 is the serum CA125 measurement in u/ml

Risk	RMI	Women %	Risk of cancer %
low	<25	40	<3
moderate	25-250	30	20
high	>250	30	75

Once an ovarian mass is detected when can one treat it conservatively? A simple cystic mass of less than 5 cm which is unilateral, unilocular and echo free with no solid parts or papillary formations, the chance of malignancy is less than 1%. More than 50% of these cysts will resolve within 3 months. These patients should have a follow up ultrasound in 4 months and depending on symptoms and clinical assessment should be managed appropriately.

If patients fall into medium to high risk for malignancy they should ideally be referred to a gynaecologist

