

OVARIAN CANCER

Faisal Al Safi, FRCSC¹, Haney Salem¹, Nashmia Al Mutairi¹

(1) King Abdulaziz Medical City – National Guard Health Affairs, Riyadh, KSA

Corresponding Author:

Dr. Faisal Al Safi, FRCSC

Department of Oncology (Mail Code 1777)

P.O. Box 22490 Riyadh 11426, Kingdom of Saudi Arabia

E-mail: safiff@ngha.med.sa

Introduction

Ovarian cancer remains a highly lethal disease. Although it is the second most common female reproductive cancer, preceded by cancer of the uterine corpus, more women die from ovarian cancer than from cervical and uterine cancer combined. The principle reason for these poor outcomes is the advance stage of disease at diagnosis in 70-75% of cases and an overall 5-year survival of only 20-30%. However, women with a diagnosis of stage 1 disease achieve a 90-95% probability of cure (1)

Risk factors

The risk of epithelial ovarian cancer increase with age, especially around the time of menopause. A family history of epithelial ovarian cancer is one of the most important risk factor, infertility and not bearing children are also risk factor, while pregnancy and use of birth control pills can decrease the risk of developing epithelial ovarian cancer. The risk factors for stromal cell and germ cell tumor are unknown (2).

Pathology

The majority (90%) of primary ovarian cancer derived from epithelial cells. Although they can also arise from other cell type (germ cell tumor,sex cord stromal tumor ,and mixed cell type tumor).(2)

Epithelial ovarian cancer [EOC] constitutes different histological subtype, of which serous type is the most prevalent 60% of all EOC. Other type include mucinous, endometrioid, clear cell, brener, and mixed phenotype tumor, in addition to their distant morphological appearance and subtle clinical differences, there is molecular evidence for heterogeneity between different EOC subtype [3].

Clinical symptoms and diagnosis

The best way to detect early ovarian cancer is to have a high index of suspicion of the diagnosis in the symptomatic women, persistent symptoms such as an increase in abdominal size, abdominal pain and bloating, fatigue, indigestion, inability to eat normally, urinary frequency, pelvic pain, constipation, back pain, urinary incontinence of recent oncent, or unexplained weight loss should be evaluated with ovarian cancer being included in differential diagnosis. Because ovarian cancer occurs most frequently in the postmenopausal women (median age approximately 60 years), these symptoms should not be ignored. Unfortunately, many clinician and patient quick to attribute such symptoms to menopause, aging, dietary changes, stress, or functional bowel problems. As a result, delays of weeks or months often occur before medical advice is sought or diagnostic studies are performed.

In evaluating this symptom physical examination including a pelvic examination and imaging studies including vaginal ultrasonography may be helpful in making circumstances because elevated levels of CA125 are associated with a variety of common benign condition .in post menopausal women with a pelvic mass, a CA125 measurement may be helpful in predicting a higher likelihood of a malignant tumor than a benign tumor, a normal CA125 measurement alone dose not rule out ovarian cancer because up to 50% of early stage cancers and 20-25% of advance cancers are associated with normal values (1,4).

Treatment

In contrast to other types of cancer, surgery is always considered for women with both localized and advanced ovarian cancer. Surgery is necessary for both accurate staging and optimal cytoreduction, and is crucial in successful treatment of this disease. The combination of optimal cytoreductive surgery and effective chemotherapy has led to significant improvements in survival for women with ovarian cancer. (2)

Screening

To date, no screening techniques; including CA125 level measurement and pelvic ultrasonography, have been proven effective in screening low risk asymptomatic women for ovarian cancer.(4)

For high risk patients, annual gynecologic examination with annual pelvic examination is recommended. Hereditary ovarian cancer is estimated to represent only 5-10% of all ovarian cancers. Based on current data, a woman with a germ line mutation of BRCA1 or BRCA2 has a life risk of 15-45% of developing ovarian cancer. There is no data demonstrating that screening improves early detection of ovarian cancer in this population. These women should be offered genetic counseling to address issues that relate to their high risk of breast and ovarian cancer and the potential impact of these genetic mutations on their offspring.

Even if this group were screened for ovarian cancer on regular basis, more than 90% of all potential ovarian cancer patients would remain unscreened. (1)

Prophylactic salpingo-oophorectomy has been shown to decrease the risk of breast and gynecological cancer in women with inherited risk for these malignancies. However, multiple questions remain unanswered regarding this procedure. (5)

Conclusion

Ovarian cancer is the most common cause of death in women from gynecological malignancy, there is no role of screening test in general population, high risk patient need annual gynecologic examination and counseling.

Recommendations and Guidelines for Screening and Prevention of Ovarian Cancer

- The committee members (Authors); after reviewing all the current available data from most of the studies conducted on the role of screening for a general population for ovarian cancer, concluded that there is no place for initiating a screening program for the women in the general population as it is proven from all the studies conducted on this issue that it will not be cost effective, and also its effect on the morbidity and mortality from the disease is very limited, as a large number of patient will be unnecessarily screened and operated on in order to detect one early case of ovarian cancer.
- For that reason, the committee members agreed that the best approach is to try to identify patients who are at high risk for ovarian cancer. Those women should be identified as women with high risk for familial ovarian cancer, and counseling should be done for them, and they should be included in a screening program designed specifically for the high risk group which will include the following:
 1. Annual pelvic examination by a gynecologist;
 2. Annual pelvic ultrasound with colored Doppler for the ovaries; and
 3. Annual CA 125 levels
- For the very high risk patients who have more than two first degree related or one first degree related and two second degree relatives, it is advised for those patients to do the BRCA 1 and BRCA 2 study, to counsel those patients and advise them regarding the advantage of performing prophylactic oophorectomy.
- The committee members feel that it is very important to educate all gynecologists regarding the issue of familial ovarian cancer where it is very important to identify the patients at high risk, where they should advise the patient regarding enrolment in this screening program, and advise

them regarding this issue, and their first and second degree relatives for the risk of familial malignancies, and encouraging involvement in a screening program.

References

- (1) AGOG committee opinion no280, December2002.
- (2) Jonathan S. Berek, Neville F. Haker. *Epithelial ovarian cancer. practical Gynecologic oncology 2004*; 4:443-494.
- (3) Scully RE. *Pathology of ovarian cancer precursors. J cell Biol 1995, 23(suppl):208-18.*
- (4) Jacobs I, Davier AP, Bridges J, et al. *Prevalence screening for ovarian cancer in post menopsausal women by CA125 measurement and ultrasonography. BMJ 1993; 306:1030-1034.*
- (5) SGO Committee statement on prophylactic salpingo-oophorectomy. *Gynecologic oncology 98(2005)179-181.*