

Research Article

PHYSICAL EXAMINATION FINDINGS IN OVARIAN TUMORS

¹I Gde Sastra Winata, ^{1*} William Alexander Setiawan, ²Jonathan Adrian, ²Gede Odi Bayu Dharma Perkasa, ²Joanne Roxanne

¹Obstetrics and Gynecology Department, Prof. Dr. I.G.N.G. Ngoerah Hospital/Medical Faculty of Udayana University, Bali, Indonesia.

²Faculty of Medicine Udayana University, Bali, Indonesia.

Received 10th August 2022; Accepted 11th September 2022; Published online 31st October 2022

ABSTRACT

Ovarian tumors are the most common gynecological disorders. In Indonesia, ovarian tumors are the third most common tumor in women with a relatively low 5-year life expectancy. Ovarian tumors are sometimes asymptomatic and have non-specific symptoms, making most cases difficult to detect early. Correct and thorough physical examination is the easiest method to suspect the diagnosis of ovarian tumor in a patient.

Keywords: physical examination, ovarian tumor.

INTRODUCTION

Ovarian tumors are the most common gynecological disorders, comprising mostly cystic lesions, with an incidence in the population ranging from 5-15%. Benign ovarian tumors are the most common, reaching a third of new gynecological cases every year. Benign ovarian tumors can be either non-neoplastic or neoplastic. Non-neoplasms are caused by inflammation or the late effects of endocrine secretions, whereas neoplasms are caused by abnormal growth of ovarian cells [Hunn and Rodriguez, 2012] In Indonesia, ovarian tumors are the third most common tumors in women with a relatively low 5-year life expectancy of 15%. Early menarche and menopause over the age of 50 are common known risk factors. Other risk factors include endometriosis, exposure to smoking, and a family history of ovarian tumors.

Ovarian tumors are oftentimes asymptomatic and have non-specific symptoms, making them difficult to detect early. Initial physical examination is the easiest method to suspect the diagnosis of ovarian tumor in a patient since they do not have specific physical examination findings. Although screening methods have been developed to be able to diagnose ovarian tumors at an early stage, one of which is by detecting the tumor marker Cancer Antigen 125 (CA-125), this examination is only performed when the clinical findings lead to the diagnosis of ovarian tumors. It is therefore important for practitioners to be able to perform the correct physical examinations and familiarize themselves with findings that could support further workup for ovarian tumors.

CLINICAL MANIFESTATION OF OVARIAN TUMORS

The evaluation should be guided by a history of the presenting symptoms and assessment of the risk factors, including personal and family history of gynecologic and other cancers. This information can help determine whether ovarian cancer should be considered as a cause of a patient's symptoms. Ovarian cancer is revealed by

increased abdominal volume, but the symptoms are vague and frequently an adnexal tumor is overlooked because the discomfort is not intense and is often confused, by the patient and even by the doctor, with gastrointestinal conditions and conditions misleadingly appearing to originate in the urinary tract. [Hunn and Rodriguez, 2012; Moyer, 2012] When the malignant ovarian tumor does become apparent, 79% of cases are diagnosed at advanced stages, and symptoms will depend on the organ affected and invaded. At this time the woman experiences intense gastrointestinal symptoms, with lower abdominal or pelvic pain, and periodic constipation and diarrhea; vaginal bleeding also occurs. The patients are usually treated as if the condition originated from ulcers, colitis, and not infrequently liver disease, mainly disease of the gallbladder. The volume and diameter of the abdomen increases suddenly, through as cites, and this leads to the gradual onset of dyspnea, in line with the amount in liters that is pressing upwards on the diaphragm and impeding respiratory movement. Unlike with other tumors, the patients' body weight increases because of the malignant-free fluid in the abdominal cavity. When an ovarian tumor is diagnosed by accident at the early stages, the usual diagnosis is of a benign adnexal tumor, which generally works for most fertile women. This generally regresses at the next menstrual period or the painful symptoms improve. [Hunn and Rodriguez, 2012; Moyer, 2012]

PHYSICAL EXAMINATION OF OVARIAN TUMORS

In general, pelvic examination only occasionally detects ovarian cancer, usually when the disease is already in advanced stages. In women who do not show symptoms, there is no evidence that screening tests are able to lower morbidity and mortality rates. Bimanual examination is not routinely performed as a screening modality. [Bloomfield *et al.*, 2014] Low malignant potential ovarian tumors present similarly to other adnexal masses. Patients may have pelvic pain, distention, or increasing abdominal girth. Alternatively, an asymptomatic mass may be palpated during routine pelvic examination. Many ovarian cysts are found incidentally on routine pelvic examination or during imaging studies for another indication. Findings vary, but typically masses are mobile, cystic, nontender, and found lateral to the uterus. [Hoffman *et al.*, 2012; Barad. 2021]

*Corresponding Author: William Alexander Setiawan,

¹Obstetrics and Gynecology Department, Prof. Dr. I.G.N.G. Ngoerah Hospital/Medical Faculty of Udayana University, Bali, Indonesia.

For ovarian cancers, a pelvic or pelvic-abdominal mass is palpable in most patients during bimanual examination. Malignant tumors tend to be solid, nodular, and fixed, but there are no classic findings that distinguish these growths from benign tumors. Paradoxically, a huge mass filling the pelvis and abdominal cavity more often represents a benign or borderline tumor. To aid surgical planning, complete pelvic and rectovaginal examinations are also performed. Distinguishing uterine from adnexal masses may be difficult. Common differentials include endometriomas and endometriosis, which manifest as nonmobile cul-de-sac masses. Adnexal cancers and benign masses are often mobile. On the other hand, hydrosalpinges are usually fluctuant, tender, nonmobile, and sometimes bilateral. [Barad, 2021; Healthcare Research, 2006; Biggs and Marks, 2021] In a review of several studies, the pooled sensitivity of pelvic examination for detecting an adnexal mass was 45% with a pooled specificity of 90%. [Hoffman *et al.*, 2012] The American College of Physicians' systematic review did not find any studies on the diagnostic accuracy of the pelvic examination for asymptomatic pelvic inflammatory disease, gynecologic cancer other than ovarian or cervical cancer, or benign conditions. Additional evaluation should be contextual depending on the patient's presentation. For physical symptoms suggestive of an adnexal mass, a pelvic examination including a speculum examination should be done.

It is imperative that the examiner remains prudent to symptoms outside the reproductive tract and perform the necessary examinations to entertain all possible differentials. Careful assessment of superficial lymph nodes throughout the body should be routinely performed. Dyspnea or abdominal symptoms should trigger auscultation and examination of the chest and abdomen. [Biggs and Marks, 2021] The presence of a fluid wave, or less commonly, flank bulging, suggests the presence of significant ascites. In a woman with a pelvic mass and ascites, the diagnosis is ovarian cancer until proven otherwise. Ascites without an identifiable pelvic mass suggests the possibility of cirrhosis or other primary malignancies such as of gastric or pancreatic origin. In advanced disease, examination of the upper abdomen usually reveals a central mass signifying omental caking. Auscultation of the chest may reveal findings consistent with malignant pleural effusions, which may not be overtly symptomatic. [Moyer, 2012] Sex cord stromal tumors of the ovary present with isosexual precocious puberty in more than 80 percent of prepubertal girls.⁶ Adolescents often report secondary amenorrhea, abdominal pain and distention. In adult women, heavy irregular bleeding and postmenopausal bleeding are the most frequent symptoms. In addition, mild hirsutism that rapidly progresses to frank virilization should prompt evaluation to exclude these tumors. The classic presentation is a postmenopausal woman with rapidly evolving stigmata of androgen excess and a complex adnexal mass. A fluid wave and other physical findings suggestive of advanced disease are rare. [Biggs and Marks, 2021; Kalfa *et al.*, 2005]

CONCLUSION

The evaluation should be guided by a history of the presenting symptoms and assessment of the risk factors, including personal and family history of gynecologic and other cancers. In general, pelvic examination and bimanual examination is done to help diagnose ovarian tumors. To aid surgical planning, complete pelvic and rectovaginal examinations are also performed.

REFERENCES

1. Hunn J, Rodriguez GC. Ovarian cancer: etiology, risk factors, and epidemiology. *Clin Obstet Gynecol.* 2012;55(1):3–23.
2. Moyer VA. Screening for ovarian cancer: U.S. Preventive Services Task Force reaffirmation recommendation statement. *Ann Intern Med.* 2012;157(12):900–904.
3. Bloomfield HE, Olson A, Greer N, et al. Screening pelvic examinations in an asymptomatic, average-risk adult woman: an evidence report or a clinical practice guideline from the American College of Physicians. *Ann Intern Med* 161(1):46. 2014.
4. Hoffman B, Schorge J, Halvorson L, Hamid C, Corton M, Schaffer J. *Williams Gynecology*. 3rd ed. New York: McGraw-Hill Education; 2012.
5. Barad D. Pelvic Mass - Gynecology and Obstetrics - MSD Manual Professional Edition [Internet]. MSD Manual Professional Edition. 2021 [cited 15 September 2021]. Available from: <https://www.msmanuals.com/professional/gynecology-and-obstetrics/symptoms-of-gynecologic-disorders/pelvic-mass>
6. Agency for Healthcare Research and Quality. Evidence report/technology assessment. Management of adnexal mass. Rockville, Md. February 2006. <http://archive.ahrq.gov/downloads/pub/evidence/pdf/adnexal/adnexal.pdf>. Accessed March 8, 2015.
7. Biggs W, Marks S. Diagnosis and Management of Adnexal Masses [Internet]. *Aafp.org.* 2021 [cited 15 September 2021]. Available from: <https://www.aafp.org/afp/2016/0415/p676.html#afp20160415p676-b12>
8. Kalfa N, Patte C, Orbach D, et al. A nationwide study of granulosa cell tumors in pre- and postpubertal girls: missed diagnosis of endocrine manifestations worsens prognosis. *J Pediatr Endocrinol Metab.* 18:25, 2005.
