

Case report: laparoscopic management of a giant ovarian cyst

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Received: 10-06-2014 / Revised: 27-06-2014 / Accepted: 30-06-2014

ABSTRACT

Ovarian cysts are of common occurrence in women but sometimes they acquire huge sizes and need to be differentiated meticulously from malignancy. Correct diagnosis can usually be made by clinical examination and use of diagnostic modalities like ultrasonography, CECT abdomen and biochemical markers. Management varies from case to case and includes both conservative and surgical modalities.

Keywords: Giant ovarian cyst, CECT abdomen, cancer biomarkers

Introduction

Ovarian cysts are of common occurrence in females and most of them are small and may resolve spontaneously but some of them may become too large to be named as giant ovarian cyst. We hereby present a case report of one such young patient with its management.

Case report

A 20 year old female presented to our department with gradually increasing abdominal mass and lower abdominal fullness of about 5 years duration.

On physical examination, a soft, cystic mass was palpable extending from symphysis pubis to the epigastric region and the abdomen was markedly distended filled with the mass. The vaginal examination was not performed because the patient was unmarried.

Her vital signs were normal. There were no abnormalities in hematologic and biochemical investigations including cancer biomarkers CA-125, CA 19-9, and carcinoembryonic antigen. On ultrasonography, a large thin walled cystic lesion with dense internal echoes and few thin internal septations, was noted arising from the pelvis and reaching upto epigastrium, and was associated with left adnexa measuring approximately 20*18*11cm with volume of 2200cc. CECT abdomen with pelvis revealed large cystic lesion with few septations and non-enhancing hyperdense areas and fatty component along its anterior anterior wal [Figure 1, 2].

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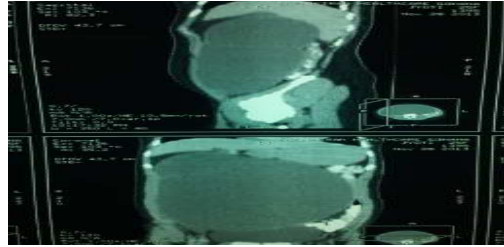


Figure 1: Ovarian cyst on cect abdomen with pelvis



Figure 2: Ovarian cyst on cect abdomen with pelvis

After complete preanaesthetic examination and informed consent, patient was planned for surgery and laparoscopic left ovarian cystectomy was performed. Intraoperatively initially aspiration of cystic mass was done via 10 mm port and after aspirating around 3L of cystic fluid, cystic wall was retrieved in toto after extending the umbilical port incision [Figure 3]. And the tissue was sent for histopathological examination.

Grossly it was a smooth walled cystic mass lesion of size around 25 * 12 cm [Figure 4, 5] and microscopic examination revealed it to be simple ovarian cyst. Postoperative period was uneventful and patient was discharged on 4th postoperative day in satisfactory condition weighing 5 kg less postoperatively from 47 kg to 42 kg.



Figure 3: Laparoscopic view of cyst



Figure 4: Gross appearance of cyst



Figure 5: Gross appearance of cyst

Discussion

Ovarian tumors can occur at any age in women's life but they differ in types. Most ovarian tumors present as cysts, but all cysts are not tumors[1]. An ovarian cyst can be of any size, from a small ping pong ball to larger than a full term pregnancy. The definition of giant ovarian cysts is not well described. Some authors define large ovarian cysts as those that are more than 10 cm in diameter as measured by preoperative scans[2]. While others define them as those that are reaching above the umbilicus[3]. Giant ovarian cyst is rare finding nowadays because of the improved imaging modalities so the diagnosis is made at an earlier stage[4]. The etiology of ovarian cysts varies based on the developmental stage of the patient and the specific hormonal stimulation present. The benign, non-neoplastic ovarian cysts are usually of functional origin. Ovarian cysts may be benign or malignant. The benign neoplastic cysts are most frequently endometrial or chocolate cyst or simple cyst. Serous and mucinous cystadenomas usually arise from neoplastic changes in germinal epithelium. The most common cystic ovarian neoplasms are serous tumors, 60% of which are benign, 25% are malignant, and 15% are borderline cases. Clinically patients with serous tumours present with huge abdominal mass with size reaching even upto 40-45 cm. Mucinous tumors also present as a large multi-loculated cystic mass filled with jelly-like fluid of which 80% are benign, 10% are borderline, and remaining 10% are malignant.

Most of bigger cysts are benign or of low grade malignancy[1,5].

Small ovarian cysts are usually asymptomatic and found incidentally clinically or on ultrasound. They may sometimes cause pain or discomfort. The first signs appear when the cyst volume increases. The increased volume of cyst may cause digestive symptoms like nausea and vomiting, thus simulates pregnancy[6]. Giant cysts lead to increase in intraabdominal pressure which may compromise cardiac and respiratory functions. It causes supine hypotension secondary to compression of the inferior vena cava [IVC] and aorta [7].

Most important investigation for diagnosis of ovarian cyst is abdominal ultrasound. It confirms the ovarian origin of mass and provides information on cystic nature and its wall structure [8]. Ultrasound findings can help to distinguish between benign and malignant tumors. A simple cyst is characteristic of a benign tumor, and consists of anechoic fluid and thin walls. A malignant cyst is characterised by solid components in the mass and septations within the mass thicker than 2-3mm [9]. Other than ultrasound, CT or magnetic resonance imaging [MRI] is useful for larger masses and examining the abdomen for metastasis[10].

Majority of the ovarian cysts regress spontaneously, so no active surgical intervention is required. Surgery needs to be done when there is persistence of the cysts, when symptomatic or when the cysts are greater than 5 cm in diameter or complex[11]. Traditionally giant

cysts have been managed by a full midline laparotomy[12]. Once the abdomen is entered and the large mass is isolated, the tumor can be resected[13]. In recent years, with availability of modern advanced techniques and expertise in minimal invasive surgery, laparoscopic excision is preferred in management of giant ovarian cyst that exceed to the umbilicus mainly due to its least invasiveness, better cosmesis and shorter hospital stay, but only few cases have been reported[14]. Giant ovarian cysts that are exceeding to the umbilicus and filling the abdomen may limit the working space during laparoscopy. To establish enough working space, giant ovarian cysts can be drained before laparoscopic approach[15]. The most important potential hazard of drainage is the possibility of cell spillage into the abdominal cavity or drainage site with the potential for subsequent seeding[16]. There is still no guidelines mentioned in the literature regarding maximal size of cyst which can be considered as contraindication, whether absolute or relative, for laparoscopic surgery. Conservative treatment is always preferred in young females of reproductive age group, with cystectomy, oophorectomy, adnexectomy performed along with preservation of the uterus and contra-lateral adnexa .

Acknowledgement

The author is thankful to management of BPS GMC Khanpur kalan, Sonapat, Haryana for their kind support.

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Source of Support: NIL

Conflict of Interest: None