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Case Report: Mucinous Cyst Adenocarcinoma of Ovary in a Young Lady

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Abstract

We present to you the case report of a 26 year old woman who came to us with a large pelvis mass corresponding to 24 weeks size. The patient was successfully operated with a right salpingoopphorectomy and infracolic omentectomy. The histopathology report went on to indicate that she had a mucinous adenocarcinoma of the ovary which is a not a very common occurrence.

Keywords: Mucinous Cyst Adenocarcinoma; Ovary; Young Lady.

1. Introduction

In the modern era of medicine, such huge mucinous ovarian tumors have become rare in the current medical practice, as most of the cases are diagnosed early during routine gynecological examinations or incidental finding on the ultrasound examination of the pelvis and abdomen [4]. Mucinous cystadenomas have origins from inclusions and invaginations of the ovarian celomic epithelium and persistence of Müllerian cells, or from Wolffian epithelium and teratomas. They often occur in the fourth and fifth decades, accounting for 25% of the ovarian tumors, 5% are bilateral and 15% are malignant. The epithelium of the cysts is usually cylindrical and mono- or multi-stratified, and cuboidal epithelium is due to the pressure inside the cyst. The classical cells show clear cytoplasm and a hyperchromatic nucleus at the base [3], Operating on a giant mucinous cystadenoma can often present as a surgical challenge due to its size as well as distortion of the pelvic anatomy [5].

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The role of imaging modalities such as computed tomography (CT) scan and magnetic resonance imaging gives better idea about the extension of the tumor in the various quadrants of the abdomen and consistency of the tumor. Management of ovarian cysts depends on the patient's age, the size of the cyst, and its histopathological nature. Conservative surgery as ovarian cystectomy and salpingo-oophorectomy is adequate for benign lesions. Four frozen section is very important to know the malignant variation of this tumor and that helps in the management of the patient. Surgical expertise is required to prevent complications as in huge tumors the anatomical planes get distorted [7].

2. Case presentation

A 26 year old ,unmarried woman , who recently completed her bachelors and now working as a teacher ,resident of Narowal, a city in Punjab ,Pakistan presented in outpatient department (OPD) with the complaints of feeling of mass in lower abdomen since two months and history of amenorrhea since one and a half months.

Patient was alright two months back when she noticed a lump in her lower abdomen which gradually increased in size. Her age of menarche was 15 years and previously her menstrual cycle was regular, 5/28 with average flow and no history of dysmenorrhea. Her LMP was 11th June 2022 and she was amenorrhic since then. There was no history of anorexia or weight loss although she had occasional epigastric pain. There was no history of vomiting and no urinary or bowel complaints. She was having mild hirsutism and acne.

She had no history of diabetes, hypertension, asthma, jaundice and tuberculosis. Her past surgical history was also insignificant. She is non-smoker and had no known drug or food allergy. She had no history of gynaecological and non-gynaecological malignancy in her family.

On general physical examination, she was fair, and all her vitals were temperature 98.6 °F, pulse rate 86 beats per minute, respiratory rate 16 per minute, blood pressure 110/70 mmHg. Breasts were normal, first and second heart sounds were normal with no added sounds, there was normal vesicular breathing with no added sounds and her central nervous system was intact.

On abdominal examination, abdomen was protuberant , a 24 week size, firm, mobile, midline mass with smooth surface and regular margins, freely mobile and non-tender. There was no shifting dullness, fluid thrill or visceromegaly. Speculum and Bimanual vaginal examination was not done because she was unmarried. Differential diagnosis of ovarian mass, fibroid uterus and mesenteric cyst. Patient was admitted. Her ultrasound revealed a complex mass having both solid and cystic components seen on the right side of midline measuring 190.1 x 87.8 x 174.5 mm in the pelvis. It had some vascularity possibly of right ovarian origin. There were mild to moderate pelvic ascites. Her Computed tomography scan showed a well-defined mass with increasing solid component originating from pelvis and extending to supraumbilical region. Pressure effects on neighboring structures were evident as bowels were displaced. There were moderate ascites with minimal non-specific omental nodules were also present. Mass was likely of right ovarian origin. Her sample for tumor markers was also taken which showed LDH, Alpha Feto Protein and Beta-HCG in normal ranges and CA 125 raised to 48.9U/ml. Exploratory laparotomy was planned and informed consent from patient and family regarding

complications and outcome was taken. Gut was prepared, blood was arranged and anesthesia fitness was done. Abdomen was opened via infraumbilical midline incision and copious amount of slimy peritoneal fluid was present, sample was taken for cytology. There was Right sided ovarian cyst almost 20 x 18 cm with intact capsule and no growth on capsule, and right sided fallopian tube was stretched over cyst. Left ovary and fallopian tube was clear. Uterus, omentum, under surface of diaphragm and upper surface of liver were normal. Right salpingoopphorectomy and infracolic omentectomy was done and drain was placed in POD and abdomen closed after securing complete hemostasis. Specimens were sent for histopathology and peritoneal fluid was sent for cytology for malignant cells. Post-operative recovery was smooth. Slimy gelatinous fluid in drain continued till sixth post-operative day, and patient was discharged on ninth post-operative day advising follow up with histopathology report. Peritoneal fluid cytology showed no malignant cells in peritoneal fluid, omental biopsy showed moderate inflammation, reactive mesothelial hyperplasia and congestion and cyst sample showed mucinous adenocarcinoma 15cm in size limited to ovary with clear fallopian tubes. Final diagnosis was Mucinous Cyst Adenocarcinoma stage 1A1. A follow up one month later showed patient was very comfortable. The patient was asked to follow up three monthly for one year and then six monthly later on.

3. Discussion

Mucinous cystadenomas are rare benign epithelial ovarian tumors which are commonly found in middle aged women and are bilateral in 10 percent cases. These tumors are known to grow to massive sizes with historical recordings of removal of a 137.4 kg tumor by O'hanlan in 1994 [2]. Benign cysts of <8 cm are conservatively managed, but cystectomy is indicated for cysts over 5 cm. Giant cysts require resection because of compressive symptoms or risk of malignancy and their management invariably requires laparotomy to prevent perforation and spillage of the cyst fluid into the cavity. Clinically, the differential diagnosis of large abdominal masses should include uterine enlargement (pregnancy and fibromyomatosis); pelvic endometriosis (pregnancy and abdominal cysts); abdominal pregnancy; urinary retention (full bladder); intestinal tumors; hydronephrotic kidney; pelvic retroperitoneal tumor; and accentuated obesity [3]. Traditionally the epithelial lining of mucinous cystadenomas can be one of 3 types – endocervical, intestinal or the mullerian type [6]. Mucinous cystadenomas are divided into three categories: benign, borderline, and malignant. Survival is largely dependent on the histology of the tumor, with 10 year survival rate of 100% for benign tumors, 60% for borderline tumors, and only 34% for the malignant subtype. Giant ovarian tumors have become rare in current medical practice, as most cases are discovered early during routine check-ups. Detection of ovarian cysts causes considerable worry for women because of fear of malignancy, but fortunately the majority of ovarian cysts are benign. These giant tumors may be associated with pressure symptoms, urinary tract changes, respiratory embarrassment and debilitation. While operating on such tumors care has to be taken to manage these complications as well as the problems associated with sudden decompensation of such large tumors [4]. Mucinous cystadenoma is a benign ovarian tumor. It is reported to occur in middle-aged women. It is rare among adolescents or in association with pregnancy. On gross appearance, mucinous tumors are characterized by cysts of variable sizes without surface invasion. Only 10% of primary mucinous cystadenoma is bilateral. In our case, the tumor was unilateral, affecting the right ovary. Management of ovarian cysts depends on the patient's age, the size of the cyst and its histopathological nature. Conservative surgery as ovarian cystectomy and salpingo- oophorectomy is adequate for benign lesions [1].

4. Conclusion

We have presented a 24 weeks size mucinous cystadenoma. Tumor marker CA 125 was also raised. Exploratory Laparotomy was done followed by right salpingoopphorectomy and infracolic omentectomy. Final histopathology report was mucinous cystadenoma of ovary of stage 1A1. Patient was discharged in healthy condition.

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6. Conflict of interest

None declared

7. Ethical approval

Not required

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