International Journal of Health Sciences and Research
www.ijhsr.org ISSN: 2249-9571

Case Report

A Rare Pseudotumor of the Ovary

Rajaratnam Annie[1*], Kuruvilla Thomas S[2**], Lyngdoh Raphael Hart[1***], Zevita Furtado[3**]

[1]Assistant Professor, [2]Associate Professor, [3]Final Year PG,
[*]Department of Obstetrics & Gynaecology, [**]Dept. of Microbiology, [***]Dept. of Pathology,
Father Muller Medical College, Kankanady, Mangalore, Karnataka. India.

Corresponding Author: Rajaratnam Annie

Received: 09/10/2014 *Revised: 13/11/2014* *Accepted: 15/11/2014*

ABSTRACT

Massive ovarian oedema is a rare pseudotumor often mistaken for a malignant tumour. Our article describes a 47-year-old patient, who presented with acute abdomen suspected to be due to ovarian torsion. The patient was posted for staging laparotomy suspecting ovarian malignancy but the histological examination confirmed it to be massive ovarian oedema.

***Keywords**:* Massive ovarian oedema, torsion, malignancy, pseudotumor ovary.

INTRODUCTION

Massive ovarian oedema may be defined as a tumour like enlargement of one or both of the ovaries caused by the production of the oedema fluid. In most cases it is caused due to the partial torsion of the ovary which is insufficient to cause necrosis. [1] The rarity of the lesion prompted us to report this case.

CASE HISTORY

A 47 year old lady para 2, living 2 presented with lower abdominal pain of three days duration. She had polymenorrhoea for the preceding three months. General examination was normal with stable vitals. On per abdomen examination a 10 x 15cm firm, irregular, non tender mass was palpated in the right iliac fossa. There was no free fluid or hepatomegaly. Per vaginal examination revealed a retroverted, normal sized uterus and a firm 10 x15cm mass was felt in the right fornix. A provisional diagnosis of right ovarian tumor was made.

An ultrasound revealed a right solid ovarian tumor with ascites. CT scan of the pelvis showed a right adnexal solid mass 10.5 x 12 x 6cm with minimum free fluid. Complete hemogram, renal function and liver function tests were within normal limits. Chest X-ray was normal. Tumor marker CA 125 was 78 U/ml. (Normal: <35 U/ml)

She underwent staging laparotomy. Intraoperatively there was minimum free fluid in the peritoneal cavity. A solid mass of 10 x 12cm arising from the right ovary was encountered. The uterus and left ovary were normal. Total abdominal hysterectomy with bilateral salphingoopherectomy, infracolic omentectomy and lymph node sampling was done.

Histopathology findings:

Grossly the right ovarian mass was solid and globular, greyish white in colour,

with areas of brownish discolouration and haemorrhage **(Fig 1)**. The microscopic examination revealed well preserved ovarian architecture. The outer cortex was thickened underneath which was hypocellular oedematous ovarian stroma. Dilated and congested vascular channels were present along with areas of haemorrhage. **(Fig 2)**

Figure 1: Ovary is enlarged and shows solid, grey white and glistening to watery cut surface.

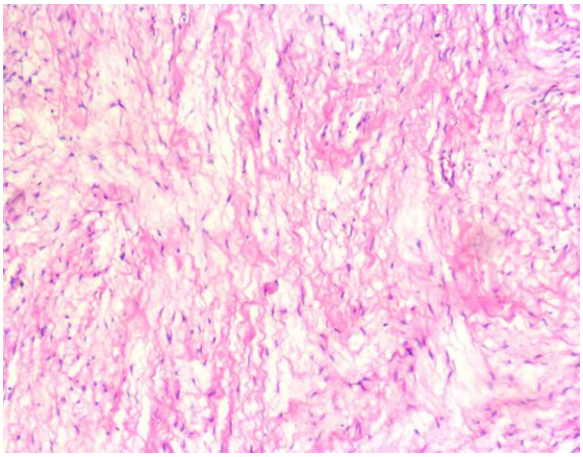

Figure 2: Marked edema of the ovary with intermingling areas showing spindle cells with elongated nucleus.

Ascitic fluid showed no malignant cells. Uterus & left adnexa was normal. Right ovary showed massive odema of ovary with focal areas of infarction. Omentum was unremarkable and pelvic nodes showed reactive hyperplasia.
Her post operative period was uneventful.

DISCUSSION

Massive ovarian oedema (MOE) is a rare entity primarily seen in young women. The etiology is not clear but is suspected to be a result of partial torsion of the ovary resulting in venous and lymphatic obstruction but not arterial occlusion hence there is no hemorrhage or infarction. [2] It occurs frequently on the right side probably due to the higher right ovarian vein pressure caused by the distinct anatomy of the venous drainage. Lymphedema leads to proliferation of stromal cells and some may convert to lutein cells resulting in virilization.

Alternatively primary stromal proliferation or stromal hyperthecosis can occur with resultant ovarian enlargement and subsequent torsion and edema. [3] Therefore MOE may be classified as primary or secondary depending on whether or not there is a concomitant pathologic finding predisposing to partial torsion of the mesovarium. It can be unilateral or bilateral. [4] It is important as it cannot be radiologically differentiated from other malignant lesions. If torsion occurs, acute abdominal pain is prominent. Menstrual irregularities, infertility and abdominal distension are found in a majority of the cases. [1] Masculinization is a common feature in adults. [5] The first report of MOE was by Kalstone etal in 1969. [6]

Luteinization might be caused by the mechanical stimulus due to stretching of the stroma by the oedema fluid. Another explanation for the oedema and abnormal hormone production is a derangement of a local paracrine factor like insulin-like growth factor (IGF), epidermal growth factor (EGF) or cytokines. [1] The estimation of IGF and EGF may have further helped confirming the etiology and probably substantiate our diagnosis. The oedema is thought to be the result of partial or intermittent torsion of the ovary causing obstruction to venous and lymphatic drainage [7,8] but in our case as the

presentation was acute, immediate surgery was performed and the patient did not have any hormonal changes.

Laparoscopy has both a diagnostic and therapeutic role in massive ovarian oedema management. [9] If the ovary is grey colored with a twisted pedicle and intact capsule it can be detorted at the pedicle allowing the ovary to regain its vitality. Then take an ovarian biopsy followed by fixation of the ovary the posterior aspect of the uterus thus conserving the ovarian tissue and preventing a further episode of torsion. [9] Following the conservative procedure, Hubbell et al recommends oral contraceptive therapy for a few months which may be beneficial in massive ovarian oedema without the evidence of torsion. [10] On the other hand fertility sparing procedures like detorsion and transfixation of the ovary or partial debulking and drainage of fluid accumulated may be the option in young women. [9]

CONCLUSION

Massive ovarian edema can rarely present in the post menopausal age and must be differentiated from other ovarian lesions such as fibroma, cystadenoma, and metastatic carcinomas. Clinical examination has its limitations, radiological investigations can be an adjunct to clinical examination but histopathology will be the main stay of diagnosis in such situations.

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How to cite this article: Annie R, Hart LR, Thomas KS et. al. A rare pseudotumor of the ovary. Int J Health Sci Res. 2014;4(12):376-378.

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