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CASE REPORT

Massive Ovarian Oedema

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ABSTRACT

Massive ovarian oedema is a rare pseudotumour. It is often mistaken for a malignant tumour. Our article describes a case of in a 36-year-old nulligravid patient, who presented with an acute abdomen which was suspected to be due to ovarian torsion. Ultrasonography revealed an enlargement of the left ovary, measuring 10 x5 x 2.5 cm. A left sided salpingo-oopherectomy was performed and the diagnosis of massive ovarian oedema was made after histological examination. Torsion was found in our case.

Key Words: Massive ovarian oedema, torsion, malignancy

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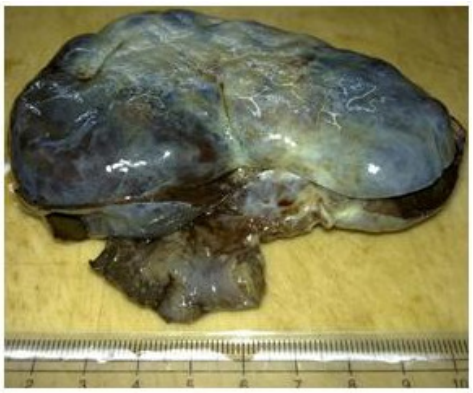
Introduction

Massive ovarian oedema may be defined as a tumour like enlargement of one or both of the ovaries, which is caused by the production of the oedema fluid. In many cases, it is caused due to the partial torsion of the ovary, which is insufficient to cause necrosis. We report this case of massive ovarian oedema in a 36 year old female who presented with an acute abdomen. The rarity of the lesion prompted us to report the case.

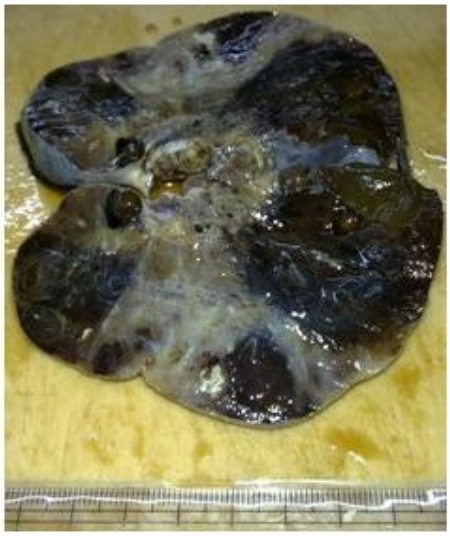
Case Report

A 36 year old lady presented to the emergency department with an acute abdomen. An ultrasound examination done, revealed a large left ovarian hypoechoic homogenous solid mass lesion with low vascularity, measuring 10 x 5cm. A left sided salpingo oopherectomy was performed and a diagnosis of massive ovarian oedema was done, based on histological examination. Torsion was found in our case.

Grossly, the mass was solid and globular, greyish white in colour, with areas of brownish discolouration and measured 10 x 5 x 2.5cm. The cut surface was solid and moist, with areas of haemorrhage [Table/Fig 1] and [Table/Fig 2] .

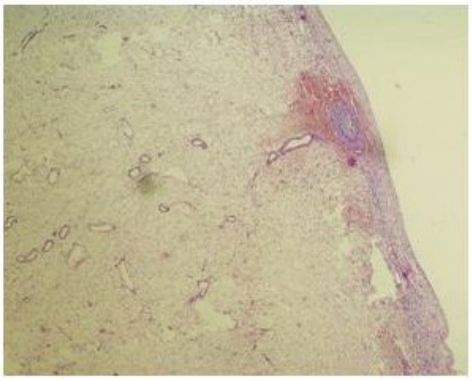


(Table/Fig 1) Solid, globular Ovarian mass with attached fallopian tube.

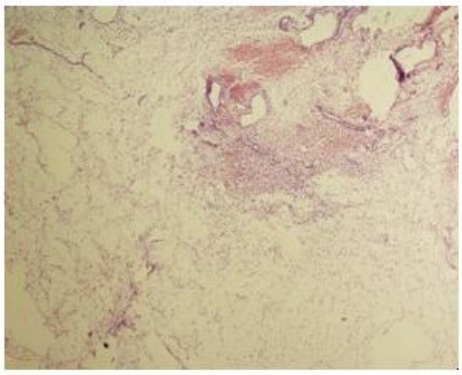


(Table/Fig 2) Cut section of the ovarian mass showing oedematous and hemorrhagic areas.

The microscopic examination revealed a preserved ovarian architecture. The outer cortex was thickened, underneath which there was hypocellular, oedematous ovarian stroma. Dilated and congested vascular channels were present along with areas of haemorrhage [Table/Fig 3] and [Table/Fig 4].



(Table/Fig 3) Section showing dense ovarian cortex and diffuse oedema of the medulla (H&E x40)



(Table/Fig 4) Section showing oedematous ovarian stroma containing stellate cells and areas of hemorrhage (H&E x 40)

Discussion

Massive solid enlargement of the ovary is a tumour-like condition occurring in young women [1], which is considered to be the result of torsion of the ovary, to the extent that it interferes with venous and lymphatic drainage, but is insufficient to cause necrosis [2],[3]. Most authors suggest that partial torsion is a likely explanation for this disorder [3] and it may be a variant of the polycystic ovary syndrome [4]. Marked enlargement of the ovary occurs and the patient usually presents with an adnexal mass. If torsion occurs, acute abdominal pain is prominent. Menstrual irregularities, infertility and abdominal distension are found in a majority of the cases [3].

Masculinization is a common feature of many adult cases [2],[3],[4],[5], precocious puberty was the presenting symptom in some prepubertal girls [6],[7], and other cases presented with vaginal bleeding or masculanization which was associated with low serum levels of gonadotropins, indicating autonomous ovarian hormone production[8],[9]. This hormone production is due to stromal luteinization, as suggested by Chervenak[8] . Kalstone suggested that the luteinization might be caused by the mechanical stimulus of the 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, epidermal growth factor or cytokines [3].

The differential diagnosis included an oedematous fibroma and Krukenberg tumour. The diffuse nature of the process and the preservation of the ovarian architecture are unlike an oedematous fibroma presenting as a circumscribed mass [10]. It's difference from a Krukenberg tumour is based on the absence of signet ring cells and the typically unilateral mass, whereas, it is bilateral in a majority of Krukenberg tumour cases.

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

Conclusion

The importance of reporting this case is the rarity of this pseudotumourous ovarian lesion and avoiding it's misdiagnosis as a solid ovarian tumour.

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