

Case 1323

Massive ovarian oedema

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Section: Genital (Female) Imaging

Published: 2002, Oct. 16

Patient: 25 year(s), female

Clinical Summary

The patient presented with low stabbing abdominal pain of one week's duration. Pertinent findings were tenderness over the left lower abdomen and a left adnexal mass on pelvic examination.

Clinical History and Imaging Procedures

The patient, gravida 0, para 0, presented with low stabbing abdominal pain of one week's duration. Menarche was at 13 years of age. Her menstrual history had always been irregular. Pertinent findings were tenderness over the left lower abdomen and a left adnexal mass on pelvic examination. There was no evidence of virilisation. All routine laboratory tests were within normal limits and a pregnancy test was negative. Ultrasound examination showed a normal sized uterus with normal echogenicity. A 4.4-cm left adnexal mass was noted. The mass was hypoechoic, with slightly increased through transmission on both transabdominal and transvaginal sonography. The mass was inseparable from the uterus and a normal left ovary could not be identified.

Laparotomy was performed and an enlarged, tense left ovary was noted at surgery; there was partial torsion of the pedicle. A wedge resection of the ovary was performed. The pathological diagnosis was massive oedema of the ovary.

Discussion

Massive oedema of the ovary was first described in 1969. It is an uncommon cause of an ovarian mass. Frequently massive ovarian oedema (MOO) is mistaken for a solid malignant neoplasm and treated by oophorectomy. It is important to recognise this entity, since the patient can be treated with wedge

resection of the affected ovary, resulting in preservation of ovarian function.

Characteristically, the lesion occurs in young women, aged 13 to 33 years, who present with acute abdominal pain and/or a palpable mass. Menstrual irregularity, frequently with signs of excess androgen production, is seen in the majority of patients and usually subsides following treatment.

Meig's syndrome occasionally accompanies MOO. In this condition the enlargement of the ovary is caused by the accumulation of fluid in the ovarian stroma, preserving the overall structure of both the ovarian cortex and medulla.

The abnormality is nearly always unilateral and the right side is involved in two-thirds of cases. The preponderance of right-sided involvement is thought to be due to high pressure in the right ovarian vein. Because of its direct drainage into the inferior vena cava, the pressure in the right ovarian vein is higher than that in the left ovarian vein, which drains into the left renal vein.

Two explanations have been proposed for the aetiology of MOO as follows: the most probable cause is regarded as recurrent partial torsion of the mesovarium, with obstruction to the venous and lymphatic returns; on the other hand, the basic process may be stromal hyperplasia or hyperthecosis, while the oedema is a secondary phenomenon, probably due to torsion of an abnormal, already enlarged organ. The association of virilisation and of menstrual abnormalities in some patients raises the question of predisposing factors.

The ultrasound findings have been reported as a solid tumour-like mass containing a cystic component. Recent reports have suggested that the ultrasound detection of multiple peripheral ovarian follicles in a solid ovarian tumour-like mass may allow the preoperative diagnosis of MOO by ultrasound alone.

Final Diagnosis

Massive ovarian oedema

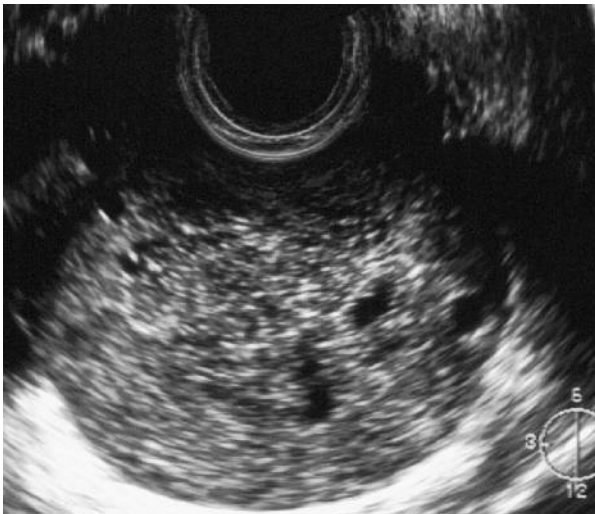
Figures

Figure 1



Transvaginal sagittal scan of a retroverted uterus. There was a mass in the posterior cul-de-sac, with multiple peripheral cysts.

Figure 2



Transvaginal transverse scan demonstrated that the mass was hypoechoic and showed some through sound transmission.

Figure 3



Section of ovary with massive oedema. The ovarian capsule was thickened, and the stroma beneath the preserved cortex was occupied by gelatinous tissue with follicular cysts.

MeSH

Ovarian Diseases [C13.371.056.630]

Disorders of ovarian function. They have varied pathology depending on the phase of the reproductive life from fetal stage to adulthood.

References

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Citation

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Massive ovarian oedema {Online}

URL: <http://www.eurorad.org/case.php?id=1323>