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Laparoscopic treatment of isolated Fallopian tube torsion at advanced gestation

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Background

Isolated fallopian tube torsion is an uncommon cause of acute lower abdominal pain in women of reproductive age and even more rare during pregnancy. The incidence is approximately 1.5 million females with only 12% identified during pregnancy[1]. Symptoms and signs are non-specific including lower abdominal pain, vomiting, and nausea. Therefore, cases are frequently misdiagnosed as having other causes of acute abdominal pain, such as appendicitis, which may delay treatment and result in salpingectomy[2].
Expedient diagnosis can be crucial to preserve fertility by performing detorsion rather than salpingectomy in earlier stages.

Case description

We present a case of a 39 year old, P2, 30 week pregnant lady presenting for the second time within a week with right sided abdominal pain and nausea. She was known to have a right sided simple ovarian cyst which had increased in size from 8cm at 20 weeks to 12 cm at 28 weeks .

On examination observations were normal and she had generalised abdominal tenderness more on the right side. The laboratory blood parameters were: haemoglobin 105 g/L, WBC14.3/L, Neutrophils11.2/L, CRP143.2mg/dl. A differential diagnosis of acute appendicitis or ovarian cyst torsion was suspected. CT scan revealed 15x3.6cm fluid collection anterolateral to the uterus on the right side.
Based on findings two diagnoses were made - acute appendicitis or adnexal torsion.

She underwent a laparoscopy where laparoscopic access was achieved using direct entry with optical port in palmer's point. A right sided torted, necrotic haematosalpinx was found with a normal right ovary and appendix. Right sided salpingectomy was performed using harmonic scalpel and specimen retrieved using a laparoscopy bag via right upper quadrant port. The histopathologic examination of the specimen revealed infarcted gangrenous fallopian tube attached to thin walled cyst . The patient was discharged on the second day after surgery without any surgical or obstetric complications.

Discussion

In the literature the most recent estimation tubal torsion incidence dates from 1970, when Hansen estimated 1 per 1.5 million women to have isolated Fallopian tube torsion in Denmark. And since 1933 only 25 cases of Fallopian tube torsion in pregnant women were described [3].

Although the clinical characteristics are not exclusive of the Fallopian tube torsion, the most common symptom is the lower abdominal pain, generally with a sudden onset and accompanied by nausea, vomiting or urinary urgency. Physical findings include abdominal tenderness, with or without peritoneal signs and an inconstant palpable mass [4].

Pre-operative diagnosis of tubal torsion is very difficult and as its management is surgical. Diagnostic laparoscopy is the tool for definitive diagnosis and treatment, even in advanced pregnancies, like the case described [5].

Laparoscopic surgery in pregnancy, in experienced hands, is a technique acceptable with some advantages, including early return of bowel function, early ambulation, short hospital stay, rapid return to normal activity, low rate of wound infection and hernia and less pain after the procedure. Another advantage of laparoscopy is less manipulation of the uterus which leads to less uterine contractions, so less spontaneous pregnancy loss, preterm labour and premature delivery[6].

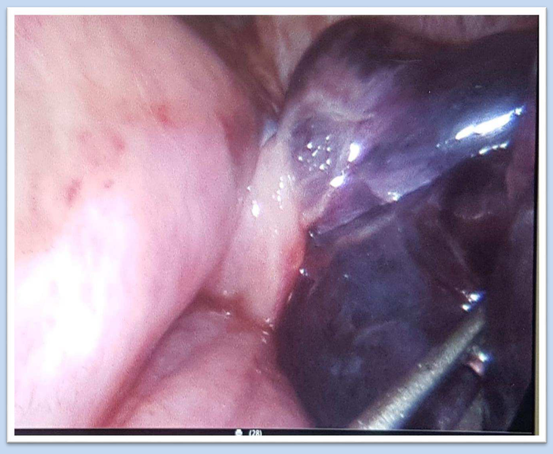

Fig.1 pedicle torsion of right tube

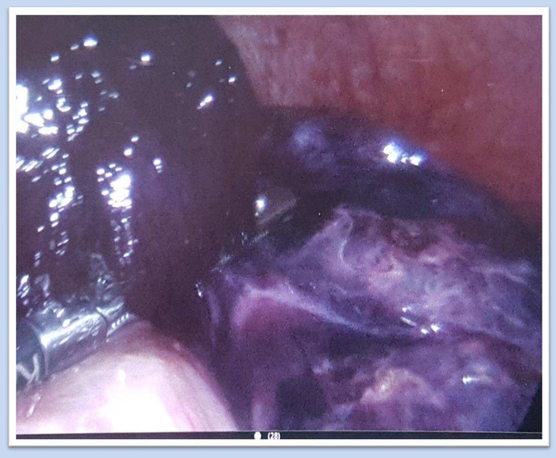

Fig.2 Gangrenous right tube

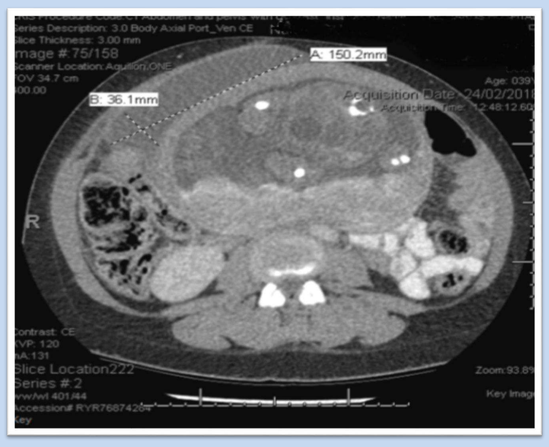

Fig.3 CT scan :fluid collection anterolateral to the uterus

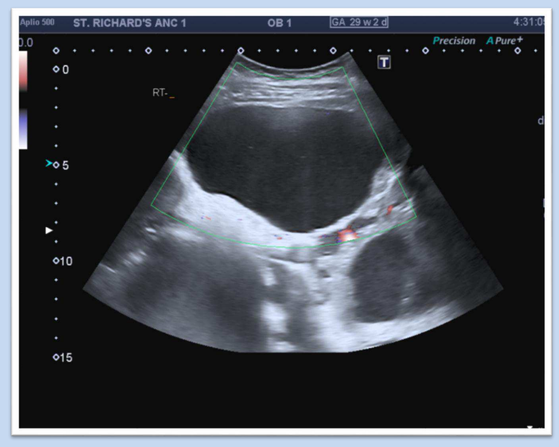

Fig. 4 Sonography showing right simple ovarian cyst

When deciding on the route of surgery clinicians should be aware that recent small series have shown good maternal and fetal outcomes for laparoscopic appendicectomy, cholecystectomy and adnexal surgery up to 34 weeks gestation, which extends the previous recommendation to limit laparoscopic surgery to the second trimester [6].

In the late second and the third trimester suggestions for primary port sites include 1-2cm below costal margin in the left (Palmers' point) or right midclavicular line or 3-6 cm above the umbilicus in the midline [6].

Other considerations which should be considered include, gravid patients should be placed in the left lateral decubitus position to minimize compression of the vena cava, CO2 insufflation of 10-15 mmHg and intraoperative CO2 monitoring by capnography should ideally be used during laparoscopy in the pregnant patient [7].

Most patients with tubal torsion are in their reproductive years, efforts should be made to preserve fertility if the ischaemic damage appears to be reversible, and no malignancy is suspected [8]. A complete resection was performed in this case because tube was gangrenous

Conclusion

Isolated tubal rupture is a rare event but should be considered within differential diagnosis of pregnant patients presenting with acute abdominal pain. Timely diagnosis is crucial to prevent adverse sequelae and preserve fertility. Laparoscopy is the gold standard for diagnosis and simultaneous management of the condition.

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