

# Successful Ovarian Conservation following Laparoscopic Detorsion of Apparent Gangrenous Twisted Ovarian Cyst in Adolescents: A Case Series

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## ABSTRACT

**Background:** Ovarian torsion is a rare gynaecological emergency in adolescent population with the incidence ranges from 2/10,000 to 4.9/100,000. It often requires immediate surgical intervention with the aim to salvage the affected ovary. If the ovary is clinically deemed non-viable with gangrenous macroscopic appearance, oophorectomy is performed traditionally. Currently, a newer conservative method of detorsion and conservation of the twisted ovarian cyst has emerged as it is proven that seemingly gangrenous ovarian tissue is still capable of remaining viable even after prolonged ischemia. The theoretically risk of untwisting a gangrenous ovarian cyst is pulmonary embolism but has been shown to be unlikely. **Case:** We reported two cases of young adolescents presented with acute abdomen secondary to ovarian cyst torsion and both were successfully managed with a two-stage conservative laparoscopic surgery (laparoscopic detorsion followed by interval cystectomy). Although the twisted ovary appeared gangrenous during emergency diagnostic laparoscopy in both cases, detorsion rather than conventional oophorectomy was performed. Subsequent second-look laparoscopy revealed viable ovary which led to only performing a cystectomy and thus salvaging a previously apparent gangrened ovary. Histopathological examination confirmed benign ovarian cyst for both cases. **Conclusion:** Laparoscopic detorsion is currently the preferred choice of treatment for twisted ovary in adolescents, despite its gangrenous appearance. This would be a superior option to maximise female ovarian reserve and future reproductive potential.

# Idiopathic Spontaneous Intraperitoneal Hemorrhage in Pregnancy – A Case Report

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## ABSTRACT

Idiopathic spontaneous intraperitoneal hemorrhage (ISIH) is very rare, associated with high mortality if not promptly diagnosed and treated. We present a case of ISIH occurring in a pregnant woman in our hospital. FD, 40-year-old Malay lady in her first pregnancy at 32 weeks gestation, presented with 1 day generalised abdominal pain and bilious vomiting. Fetal movements were good. She was stable but had tenderness over the right iliac fossa. An urgent exploratory laparotomy was performed when assessment revealed large amount of free fluid and intrauterine fetal demise. Massive hemoperitoneum was confirmed without any obvious source of bleeding, except of a small hematoma at the left iliac fossa measuring 4 cm x 1 cm seen. About 3800 ml blood was evacuated, abdomen was packed and closed up. FD undergone pelvic angiogram but there was no evidence of active arterial haemorrhage or abnormal vessel malformation. She then had relaparotomy 2 days later to remove abdominal packs. The previously seen hematoma at the left iliac fossa remained unchanged in size. FD delivered a macerated still birth a few days later after induction. A total of 6 pints packed cell, and 4 units of fresh frozen plasma were transfused throughout. FD subsequently developed right pulmonary artery embolism and right common iliac vein thrombosis, which were provoked following the ISIH and prolonged hospital despite thromboprophylaxis. A series of blood investigation were done to rule out haematological disorder, however no abnormality was detected. FD subsequently recovered well. ISIH was first described in pregnancy by Barber in 1909. Green and Powers termed it "intra-abdominal apoplexy" in 1931 to describe an unpredictable, catastrophic event involving the spontaneous rupture of an intra-abdominal vessel. The causes of non-traumatic spontaneous hemoperitoneum include vascular, haematological, hepatic, splenic, gynaecological or cryptogenic disease. In pregnancy they are mostly due to utero-ovarian or splenic artery rupture. Idiopathic bleeds are believed to be vascular bleeds which have stopped following drop in blood pressure at the time of operation, making it difficult to site, which might recur if the blood clots are dislodged. The bleeding source could not be identified in approximately 30% of cases, either by CT scan, angiography or intra-operatively. ISIH has been reported to occur anytime during pregnancy, with 61% antepartum, 8% intrapartum, and 21% postpartum. These cases presented variedly with acute typical abdominal pain and shock. High index of suspicion, early intervention and excellent resuscitation are keys to successful management as in the case of FD.