Acute Abdomen Caused by Adnexal Torsion in the First Trimester of Pregnancy: A Case Report

Milan Terzić1,2, Slavica Aksam1,2, Sanja Maričić3, Nebojša Arsenović4

1Hospital of Obstetrics and Gynaecology, Clinical Centre of Serbia, Belgrade, Serbia; 2School of Medicine, University of Belgrade, Belgrade, Serbia; 3General Health Centre “Savski venac”, Belgrade, Serbia; 4Cellular Pathology Department, PathLinks Pathology Service, Lincoln County Hospital, Lincoln, UK

INTRODUCTION

Acute abdomen in pregnancy is a relatively rare entity with incidence ranging from 1:500 to 1:635 of pregnancies [1, 2]. The most common etiologic factors of this sudden, severe, life threatening clinical condition are torsion and/or rupture of adnexal tumour, appendicitis, acute diverticulitis, ileus, and spontaneous rupture of the liver or spleen. The incidence of adnexal torsion in pregnancy is 1-5:10,000 of spontaneously achieved pregnancies [3]. Ovarian torsion is almost four times more common in pregnant than in non-pregnant women, with free mobility and a long adnexal pedicle as the predisposing factors [4]. After ovarian stimulation the incidence rises dramatically to 6%, and reaches as high as 16% in cases of ovarian hyperstimulation [4]. The most common cause of adnexal mass is found to be a corpus luteum cyst, while the incidence of dermoid cyst and serious cystadenoma is much lower. Corpus luteum cysts are found in 7-9% of the patients in the first ten weeks of pregnancy, while in the second trimester they are found in only 0.3% of patients with adnexal mass [5]. Usually, corpus luteum cysts resolve spontaneously by the end of the first trimester. Ovarian malignancy is confirmed in about 5% of pregnant women with adnexal mass [6]. The highest incidence of adnexal mass torsion is found in the first trimester of pregnancy and after delivery [7]. Laparotomy for adnexal mass is reported in 1:950 of pregnancies [8].

CASE REPORT

A 31-year-old woman was admitted due to acute severe right lower abdominal pain in the 10th gestational week of pregnancy. The pain started few hours prior to admission, and was predominantly localized, occasionally irradiating to the central parts of the lower abdomen, accompanied by nausea and vomiting. Ultrasound revealed viable intrauterine pregnancy and right adnexal mass with small amount of free fluid in the Douglas pouch. After short preoperative evaluation, laparotomy and adnexectomy were performed. Surgery and postoperative follow-up were uneventful, and histopathology reported torquated corpus luteum cysts.

SUMMARY

Introduction Adnexal torsion is a rare cause of acute abdominal pain during pregnancy. The clinical and laboratory findings are non-specific. In this paper we present a case of adnexal torsion in the first trimester of pregnancy.

Case Outline On admission, the patient presented signs of acute abdomen. The pain started few hours prior to admission, and was predominantly localized, occasionally irradiating to the central parts of the lower abdomen, accompanied by nausea and vomiting. Ultrasound revealed viable intrauterine pregnancy and right adnexal mass with small amount of free fluid in the Douglas pouch. After short preoperative evaluation, laparotomy and adnexectomy were performed. Surgery and postoperative follow-up were uneventful, and histopathology reported torquated corpus luteum cysts.

Conclusion The diagnosis of adnexal torsion during pregnancy is difficult, and occasionally remains a diagnostic dilemma. Surgery is inevitable, must be prompt, and comprises adnexectomy.

Keywords: adnexal torsion; pregnancy; first trimester; ultrasound; surgery
belonging to the right adnexa, and twisted once at the level of the infundibulopelvic ligament. A very small amount of sero-haemorrhagic free fluid found in the abdominal cavity, was sent for microbiological and cytological examination. Apart from that, all other findings in the abdominal cavity were normal. A right salpingo-oophorectomy was performed. On the second postoperative day, due to uterine contractions and slight vaginal bleeding, progesterogens were administered vaginally. Postoperative course was uneventful, and the patient was discharged with histological confirmation of haemorrhagic infarction of corpus luteum haemorrhagicum cysticum causing acute abdomen.

**DISCUSSION**

According to the literature data, 0.2% of pregnancies are complicated with nonobstetric abdominal pathology in need of surgery [9]. Symptoms and signs of adnexal torsion are non specific, and can be confused with other acute abdominal conditions such as appendicitis, ureteral or renal colic, cholecystitis and bowel obstruction [10, 11]. Complete torsion causes venous and lymphatic blockage, leading to stasis and venous congestion, haemorrhage and necrosis, while the patient usually presents an acute severe pain [12, 13]. Some authors stress the fact that predominant symptoms are nausea, vomiting, fever and symptoms of the urinary tract [14]. Right ovarian torsion is more frequent than torsion of the left ovary, which can be explained by the fact that the right ovary has more space than the left one due to the localization of the sigmoid colon and/or due to the hypermobility of the cecum and distal ileum [15]. Diagnostic procedures during pregnancy should be safe, and comprise ultrasound as a primary diagnostic method used in these cases [16]. Power Doppler suggests a reduced perfusion of the ovary, with dilated ovarian vessels. Doppler sonography, although highly specific, has low sensitivity, as it may misdiagnose in approximately 60% cases [17, 18]. Only magnetic resonance imaging can clearly delineate the ovarian origin, as well as the nature of the mass [19, 20].

Management of adnexal torsion in pregnancy remains controversial. Although the laparoscopic approach combined with simple detorsion has been described in the third trimester, laparotomy and salpingo-oophorectomy may sometimes be necessary [18, 21, 22]. Traditionally, abdominal complications during pregnancy have been treated by laparotomy. Nowadays, laparoscopy is considered the preferable surgical option until approximately the 16th week of gestation [23]. The majority of the literature available state that most patients with ovarian torsion arrive at hospital too late to spare the ovary. Considering this delay in establishing the diagnosis, the vast majority of acute adnexal torsion must be solved by salpingo-oophorectomy [24]. Following the procedure performed in the first 12 weeks of gestation, substitution of progesterone is recommended in order to support an early pregnancy and prevent early pregnancy loss. After this period, progesterone is produced by the placenta, and progesterone supplementation is not advised as a routine approach.

Adnexal torsion is a rare event during pregnancy, which requires differential diagnosis from other diseases presenting the same symptoms. This serious condition requires a prompt surgery. Considering the fact that patients usually have symptoms for hours prior to admission which inevitably leads to irreversible ovarian necrosis, adnexectomy is the procedure of choice. Surgery during pregnancy is well tolerated and, done without delay, usually enables further course and successful pregnancy outcome.

**REFERENCES**

Акутни бол у абдомену изазван торзијом аднекса у првом триместру трудноће – приказ болесника

Милан Терзић1,2, Славица Аксам1,2, Сања Маричић3, Небојша Арсеновић4
1Клиника за гинекологију и акушерство, Клинички центар Србије, Београд, Србија;
2Медицински факултет, Универзитет у Београду, Београд, Србија;
3Дом здравља „Савски венац“, Београд, Србија;
4Одељење за ћелијску патологију, Окружна болница, Линколн, Велика Британија

Увод
Торзија аднекса је редак узрок акутног бола у абдомену током трудноће. Клинички и лабораторијски налази се неспецифични. У раду је приказан случај торзије аднекса у првом триместру трудноће.

Приказ болесника
На пријему код труднице су се испољавали знаци акутног бола у абдомену. Бол се јавио неколико сати пре пријема и превасходно је био локализован десно ингвинално, повремено се ширећи на централне делове доњег трбуха, а био је праћен мутиналном и повраћањем. Ултразвуковим прегледом су установљене витална интраутерусна трудноћа и аднексална маса десно с малом количином спободне течности у Дуаласовом простору. После кратког преоперационог прегледа урађене су лапаротомија и аднексектомија. Постоперациони ток је протекао нормално, а хистопатолошки налаз је указао на торкирану цисту жутог тела.

Закључак
Дијагноза торзије аднекса у трудноћи се тешко поставља и понекад остају дијагностичке диплме. Хируршки захват се мора извести брзо и подразумева аднексектомију.

Кључне речи: торзија аднекса; трудноћа; први триместар; ултразвук; хирургија

Примљен • Received: 16/04/2010
Прихваћен • Accepted: 11/05/2010