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

Milan Terzić[1,2], Slavica Aksam[1,2], Sanja Maričić[3], Nebojša Arsenović[4]

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

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

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. The patient was subfebrile, with a normal bowel evacuation, and with normal urine findings, white blood cells count was elevated to 16,800/mm^3, and CRP was within normal range. The patient's blood pressure and heart rate were both normal.

On palpation, the abdomen was highly sensitive in the right hypochondrium. The uterus was soft, smooth and mobile, corresponding to the 10th gestational week, with no haemorrhage. A 9 cm, tender, partly mobile, painful palpable mass with smooth surface and elastic consistence was present in the right adnexal region. Other gynaecological findings were normal.

Ultrasound confirmed normal intrauterine pregnancy. In the right adnexal region there was a complex, mainly hyperechogenic mass 90×90 mm in diameter, with well-defined contours and small hypoechogenic areas. A small amount of free fluid was present in the Douglas' pouch.

An urgent laparotomy was performed for acute abdomen. Adjacent to the right hand side of the uterus, there was a necrotic, pletoric and haemorrhagic mass, 9 cm in diameter

Correspondence to:
Milan M. TERZIĆ
Hospital of Obstetrics and Gynaecology
Clinical Centre of Serbia
Višegradska 26, 11000 Belgrade
Serbia
terzicmilan@yahoo.co.uk

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, progestogens were administered vaginally. Postoperative course was uneventful, and the patient was discharged with histological confirmation of haemorrhagic infarceration 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 coecum 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.

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

Милан Терзић[1,2], Славица Аксам[1,2], Сања Маричић[3], Небојша Арсеновић[4]

[1]Клиника за гинекологију и акушерство, Клинички центар Србије, Београд, Србија;
[2]Медицински факултет, Универзитет у Београду, Београд, Србија;
[3]Дом здравља „Савски венац", Београд, Србија;
[4]Одељење за ћелијску патологију, Окружна болница, Линколн, Велика Британија

КРАТАК САДРЖАЈ

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

Приказ болесника На пријему код трудице 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 мучнином и повраћањем. Ултразвучним прегледом су установљене витална интраутерусна трудноћа и аднексална маса десно с малом количином слободне течности у Дугласовом простору. После кратког преоперационог прегледа урађене су лапаротомија и аднексектомија. Постоперациони ток је протекао нормално, а хистопатолошки налаз је указао на торквирану цисту жутог тела.

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

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

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