Laparoscopic Management of a Rare Case of Spontaneous Adnexal Torsion in an Adolescent

ABSTRACT

The occurrence of spontaneous torsion of normal ovary and fallopian tube in an adolescent is very rare. We report a case of a 14-year-old post-menarche teenager who presented as acute abdomen. Here, we discuss the differential diagnosis of acute pain abdomen, importance of immediate diagnostic laparoscopy and prompt decision for detorsion of the ovarian pedicle and mesoalphtinx to salvage the fallopian tube and ovary, which has a bearing on future reproduction. The teenager is on follow-up for 4 years and has regular cycles and no recurrence of the symptoms.

Key words: Adnexal torsion, adolescent, diagnostic laparoscopy

INTRODUCTION

Adnexal torsion contributes to 2.7% of all gynecologic emergencies in the reproductive age group.[1] Spontaneous torsion of the ovarian pedicle along with mesosalpinx, which otherwise were anatomically normal and presenting as an acute abdomen in a post-menarcheal adolescent, is a very rare clinical entity.

Ovarian torsion was described for the first time by Kustener (1891) as partial or complete rotation of the ovarian pedicle on its long axis, potentially compromising venous and lymphatic drainage.[2]

The standard approach was salpingo-oophorectomy without detorting the adnexa. Mage et al., 1989,[3] proved that detorsion and preservation of adnexa is an alternative mode of treatment, which has been accepted.

Because of the absence of pathognomonic clinical symptoms or signs, ultrasonography and Doppler study of the ovarian pedicle do not exclude ovarian torsion; we need to rely on clinical suspicion. The authors observed that the best surgical outcome for these young women would be to perform a diagnostic laparoscopy and detorsion of the ovarian pedicle as early as possible to prevent further ischemic injury to the ovary and tube, which otherwise may have a devastating effect on the future reproductive performance.[4]

Follow-up is essential to determine their reproductive outcomes and anticipate recurrence.

CASE REPORT

A 14-year-old presented with history of acute pain abdomen, pointing to the right iliac fossa, which was intermittent and colicky in nature and radiating to the thighs. She was unable to ambulate and had five to six episodes of vomiting and...
giddiness. She had attained menarche 5 months back, and was having regular cycles with spasmodic dysmenorrhea. The incident occurred on day 3 of her cycle. On general physical examination, she had adequate age-related physical and secondary sexual characters. On abdominal palpation, only deep-seated right iliac fossa tenderness and rebound tenderness could be elicited. The patient declined per rectal examination. A provisional diagnosis of acute appendicitis and the possibility of adnexal torsion was high on our mind as she was menstruating. Ultrasound was not performed as it was time-consuming and non-specific. Laboratory investigations revealed only an increased total count and neutrophilia.

Diagnostic laparoscopy revealed normal peripubertal uterus and normal left ovary and fallopian tube. The right tube and ovary were appearing congested and edematous [Figure 1]. The leading point of torsion, about two to three turns, was seen close to the right cornua [Figure 2]. After confirming the diagnosis of adnexal torsion and ruling out appendicitis, detorsion of the ovarian pedicle was performed. Release of the constriction ring formed on the ovarian pedicle and the meso-salpinx was performed. Within 15 min, the constriction ring disappeared and normal pulsations in the ovarian pedicle could be visualized. Also, the deeply blue and congested ovary and tube regained their color and contour, although with areas of hemorrhage on the ovary [Figures 3a and b]. The tube and ovary did not show evidence of any gross pathology, reconfirming the fact it was a spontaneous adnexal torsion of the normal adnexa, probably due to increased vascularity during menstruation [Figure 4]. Oophoropexy was not performed as the tissues were friable.
and the reproductive outcome of such a procedure has not been documented in the literature. The post-operative period was uneventful. She is on follow-up for 4 years, with normal cycles except for spasmodic dysmenorrhea, which responds to spasmolytics, and with no clinical evidence of recurrence.

DISCUSSION

The differential diagnosis for acute pain abdomen, colicky in nature, with rebound tenderness in an adolescent in the peripubertal age group includes acute appendicitis, right ovarian cyst with torsion or intracystic bleeding and corpus luteum cyst rupture, ectopic pregnancy, adnexal torsion or isolated tubal torsion.

Because the pain was in the right iliac fossa with rebound tenderness suggesting local peritonitis and inflammation, and there was a raised total count with leucocytosis, acute appendicitis was first considered. Ectopic pregnancy was ruled out, as there was no history of abuse or sexual exposure and the urine pregnancy test was negative. Clinical features of right ovarian cyst, corpus luteum cyst, or an adnexal component with hemorrhage and/or torsion, presenting as intermittent colicky pain, fever and leucocytosis, low haemoglobin due the internal bleed or rupture of the cyst around the peri menstrual period can be confounding and overlapping and hence the differential diagnosis can be broad. Adnexal torsion being an uncommon cause for acute pain abdomen needs a high degree of clinical suspicion, which can change the management outcome, and should be considered in all young women with acute pain abdomen.[9]

Ultrasound and Doppler of ovarian vessels may be contributory, but not definitive. A similar experience has been reported by Chang et al.[9] As a scan was not performed to save time, a diagnostic laparoscopy and detorsion of the ovarian pedicle and the mesosalpinx was executed. The macroscopic appearance of the ovary was not a reliable indicator of the degree of necrosis and potential for ovarian recovery; therefore, it is worth the wait for change in color following detorsion. Within 15 min, the adnexal structures regained normal color and contour; a similar experience has also been reported by Ben-Arie et al,[7] oophoropexy was not performed as the tissues were very friable and the reproductive outcomes of such a procedure were not known. Cass[8] strongly considered oophoropexy.

Spontaneous torsion of the ovarian pedicle with an anatomically normal tube and ovary presenting as an acute abdomen in a post-menarcheal adolescent reported in the present study is a very rare clinical entity. This may be the first case to date being published in the English medical literature. Hence, it has to be considered in the differential diagnosis. By avoiding non-specific, time-consuming diagnostic work-up, we strongly recommend diagnostic laparoscopy and detorsion of the ovarian pedicle and mesosalpinx to prevent further catastrophic consequences and preserve fertility in these young women. The time factor from the diagnosis to intervention plays a critical role in salvaging the reproductive functions.

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