

Asynchronous ovarian torsion – the case for prophylactic oophoropexy

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Summary: The case of an 11 year old girl who suffered torsion of the left ovary 8 months following right oophorectomy for a similar event is presented. The left ovary was saved by immediate surgical intervention. The value of prophylactic oophoropexy in unilateral ovarian torsion is discussed.

Introduction

Torsion of the adnexa in premenarcheal girls is a rare event but well known to the paediatric surgeon. Not infrequently this condition occurs in a previously normal ovary.¹ An accurate pre-operative diagnosis is only made in about one third of cases, and by the time surgery is undertaken the affected adnexa has usually suffered haemorrhagic infarction and is removed.¹ Subsequent asynchronous torsion of the remaining functional ovary has been reported in the literature, and usually leads to castration.^{2–3} We report the case of a premenarcheal girl who suffered asynchronous ovarian torsion. The remaining ovary was saved by early surgical intervention.

Case report

An 11 year old girl was admitted to the paediatric surgical department with a 24 hour history of sudden, constant left lower quadrant pain. Examination demonstrated tenderness to deep palpation in the left lower quadrant without peritoneal signs.

Eight months previously, she had been admitted twice to the same hospital with recurrent right lower quadrant pain. On the first occasion her pain settled completely within 24 hours, on the second admission her symptoms persisted and she underwent laparotomy with a preoperative diagnosis of acute appendicitis. However, a torsed non-viable right ovary was found and had to be removed. Histopathological examination confirmed haemorrhagic infarction of the ovary in the absence of tumour or gross cystic disease.

Because of this history, torsion of the left ovary was suspected, and an ultrasound scan demonstrated features consistent with this diagnosis (Figure 1). An emergency laparotomy was performed which revealed a large oedematous ovary which had torted through 360° and contained several small follicular cysts. The ovary was viable, and following detorsion and drainage of the cysts, oophoropexy was performed by fixing the gonad to the lateral pelvic wall with interrupted 2/0 Dexon™ sutures (Davis & Geck, Auckland, New Zealand). Subsequent recovery was uneventful and she was discharged 3 days later.

Eight months following oophoropexy this girl underwent diagnostic laparoscopy for nonspecific lower abdominal pain. This showed some omental adhesions but a normal looking left ovary well fixed to the pelvic wall that could not be moved with laparoscopic instruments.



Figure 1 Pelvic ultrasound scan demonstrating an enlarged left ovary containing several small follicles lying behind the bladder.

Discussion

Unilateral childhood ovarian loss due to torsion is rare. Large paediatric surgical departments can expect to deal with one such case every 0.6–1.6 years.^{1,4} Torted ovaries usually contain a cystic mass or tumour, but in one series the number of previously normal organs was as high as 68%.¹ The right adnexa is more frequently involved than the left, and symptoms often closely mimic appendicitis.¹ The preoperative diagnosis is only correct in about 37% of cases and is usually based on sonographic findings.¹ This shows characteristic features of diffuse swelling of the ovarian parenchyma and follicular enlargement in the cortical zone.⁵ At operation, revascularization following detorsion is the exception, and haemorrhagic infarction usually demands salpingo-oophorectomy. Totally asymptomatic cases of previous ovarian torsion have also been reported, in which intraperitoneal loose bodies were retrieved incidentally,^{1,4} or in which calcified pelvic masses were identified sonographically.⁶

Once a girl has lost one ovary due to torsion, she is at risk of being castrated should the contralateral organ undergo torsion as well. This is extremely rare, but for the affected girl it represents a catastrophic event. In a 35 year retrospective review, Shun found only one such case in his department where the ovary was occupied by a large haemorrhagic follicular cyst.⁴ As far as normal ovaries are concerned, Wakamatsu located 16 such cases in the world literature since 1895 and added one of his own.³

The current surgical approach to the remaining ovary following unilateral oophorectomy for torsion remains controversial. Weir and Brown state that bilateral torsion is more likely to occur

simultaneously rather than sequentially and prophylactic oophorectomy is not indicated.⁷ Spigland reports 19 girls with adnexal torsion over a 12 year period but he does not mention his approach to the contralateral ovary.¹ Davis and Feins raise the question of prophylactic oophorectomy and state that it should at least be considered.² Their view is also shared by Wakamatsu.³ Only Shun recommends prophylactic fixation of the contralateral ovary at the time of unilateral oophorectomy, regardless of the pathology, in order to prevent castration.⁴

In our case the contralateral ovary was saved by immediate surgical intervention. However, had prophylactic oophorectomy been performed at the time of the initial operation, subsequent torsion and the risk of castration would have been abolished. We share Shun's view that prophylactic oophorectomy should be performed in all cases of unilateral ovarian torsion in children. The time spent fixing contralateral ovaries that will not subsequently tort is a small price to pay to prevent the occasional disaster of castration in a young girl.

Laparoscopic treatment of adnexal torsion in adults is being performed increasingly with the largest reported series comprising 35 cases.⁸ Laparoscopic oophorectomy has been reported in one case with an unusual congenital ovarian attachment using a fallopian ring, but was followed 12 months later by recurrence of the torsion. Following the recent advances in laparoscopic surgery, it is now possible to perform oophorectomy laparoscopically, in a manner very similar to the open operation, using laparoscopic sutures and needle holders. This technique is likely to be used increasingly by paediatric surgeons both for diagnosis and treatment of ovarian torsion.

References

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