Isolated Uterine Tube Torsion
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History
12 year old female with right lower quadrant pain for 1 month.

Diagnosis
Isolated Uterine Tube Torsion

Additional Clinical
Normal ovaries on US and MR.
Pathology—Hemorrhagic necrosis of the uterine tube.

Discussion
Isolated fallopian tube torsion is a very rare cause of lower quadrant pain that primarily affects adolescents and ovulating women. Risk factors for isolated fallopian tube torsion include pelvic inflammatory disease, hydrosalpinx, tubal ligation, tubal neoplasm, adhesions, adnexal venous congestion, adjacent ovarian or paraovarian masses, uterine masses, gravid uterus, and trauma. Patients present with a sudden onset of lower quadrant pain that can be constant and dull or paroxysmal and sharp, radiating to the thigh or groin. Presenting signs and symptoms also include nausea and vomiting, peritoneal signs, and a discrete adnexal mass.

A proposed mechanism of injury suggests obstruction of adnexal veins and lymphatics, leading to pelvic congestion and edema, enlargement of the fimbrial end of the tube, and subsequent partial to complete torsion. Vascular supply to the fallopian tubes and ovaries comes from both ovarian and uterine vessels, resulting in the possibility of isolated tubal torsion without vascular compromise of the ovary. Tubal torsion more commonly affects the right side, possibly because of partial immobilization of the left tube by its proximity to the sigmoid mesentery and because right lower quadrant pain is more often surgically explored secondary to the concern for appendicitis.

Although ovarian torsion with associated tubal torsion is far more common than isolated tubal torsion, the imaging diagnosis of an isolated tubal torsion is far more difficult because of the lack of specific findings. It is important to recognize the possibility of this diagnosis in the setting of hydrosalpinx with a sonographically normal ovary in a patient with acute pain.

Findings
US—Serpinous tubular fluid collection in the right adnexal region.
MR—Tubular structure represents the fallopian tube (note the fimbria on the sagittal T2 image).

Reference
Gross M, Blumstein SL, Chow LC. Isolated Fallopian Tube Torsion: A Rare Twist on a Common Theme. AJR (2005); 185:1590-1592.

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