Ovarian Torsion in a 7-Year-Old
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This case illustrates a rare example of an ovarian torsion in a 7-year-old female diagnosed with CT scan. Given that patient’s atypical presentation with the resulting consequence of an oophorectomy, this case further demonstrates the need for an Emergency Medicine Clinician to keep this diagnosis in mind for all young females presenting with lower abdominal pain.

Introduction

- Ovarian torsion is a true surgical emergency
- Mean age of diagnosis is 9.2 with more than half of all cases (52%) between 9 and 14 years of age
- Has a bimodal distribution corresponding to hormonal fluctuations with peak incidences below 1 and between 9 and 14
- Cases below 9 years of age rarely reported
- Most common symptoms on presentation are pain (generally right sided), nausea and vomiting
- More common illnesses such as urinary tract infections, appendicitis, constipation or gastroenteritis often take precedence
- Given the low incidence and atypical presentation there is often significant delay in diagnosis in the pediatric population
- Given the diagnostic delay ovarian salvage rates have been historically poor with a reported 50 to 91% rate of oophorectomy

Clinical Case

- A 7 year-old female presented with complaints of right lower quadrant pain associated with two episodes of nonbloody emesis
- There were no complaints of fever or diarrhea
- Patient had no pertinent family, social, surgical or medical history
- There was no antecedent trauma, recent illness or hospitalizations
- Patient unable to fully describe pain but pointed to McBurney’s point.

Strategies and Evidence

- On physical exam, the patient was afebrile
- There was mild to moderate tenderness to palpation over her right lower quadrant without guarding, rigidity or peritoneal signs
- Initial studies included a WBC of 13,700, Neutrophils of 75.7%
- A BMP showed only hypokalemia with potassium of 2.9
- A UA showed only trace leukocyte esterase but no nitrites or blood with 1-2 WBC per HPF
- An abdominal CT scan of the abdomen and pelvis with p.o. and IV contrast revealed a 5 cm cystic and solid appearing lesion in the right para-midline pelvis thought to most likely represent an exophytic right ovarian lesion, possibly neoplasm, with consideration for superimposed torsion.
- Patient was transferred to a tertiary care center where she underwent immediate surgery that confirmed the diagnosis of ovarian torsion with resulting right oophorectomy.

Conclusion and Recommendations

- Ovarian torsion, while rare in the pediatric population, demonstrate a true surgical emergency
- Ultrasound is the modality of choice in females with suspected ovarian torsion with most common finding being an enlarged heterogeneous ovary.
- The addition of Doppler has not been proven to be useful in the diagnosis of torsion in that while lack of blood flow confirms the diagnosis, torsed ovaries may continue to display flow.
- CT scanning has been reported in few cases and is generally reserved as an adjunct to ultrasound or when other diagnoses (such as appendicitis) need to be pursued
- Symptoms on presentation may be atypical and often confused for other more likely diagnoses (such as gastroenteritis, urinary tract infection or constipation
- Diagnosis of ovarian torsion often delayed in pediatric population leading to historically high oophorectomy rates.
- Mainstay of treatment is emergent laparoscopy with detorsion

References