Lower Right Quadrant Pain in a D1 Basketball Player

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**Background:** An 18 year old female basketball athlete reported to the ATR with lower right abdominal pain. History revealed no apparent mechanism or previous abdominal injuries. The athlete stated she began noticing a throbbing pain (3/10) that morning and the pain had become progressively sharper and stronger (8/10) in the passing three hours. She stated she had no appetite that morning with some nausea, but no occurrence of vomiting. Observation revealed no ecchymosis or significant swelling. Mild abdominal rigidity was noted in the lower right quadrant along with rebound tenderness. Palpation was painful distal to the umbilicus in the lower right quadrant. The pain was diffuse, and athlete stated “it felt like a deep pain.” Gross trunk movements were painful with the athlete feeling most relief from pain in a fetal position. Further questioning revealed no behaviors out of the ordinary for this athlete or increased duration or intensity of workouts. Due to the severity of the pain and other associated signs and symptoms, athlete was withheld from practice and referred to the team physician. **Differential Diagnosis:** Appendicitis, Ovarian Cyst, Ectopic (Tubular) Pregnancy, Internal Oblique Muscle Strain. **Treatment:** Upon evaluation, the team physician ordered diagnostic imaging including a CT scan with oral and intravenous contrast, a CBC, and a urinalysis. Both the CBC and the urinalysis came back negative. After reviewing the CT images, the MD was able to rule out appendicitis, but identified an abnormal growth on the athlete’s right ovary (7.4 x 6.1 x 5.4 cm). Following further medical inquiry of the images by adjusting contrast, the growth showed presence of two calcifications, one 7 mm across and the other 2 mm across, as well as fatty and non-fatty components. The mass was identified as a benign ovarian teratoma of the dermal
cyst variety with a Gonzalez-Crussi grading of 0, indicating no malignant growths present. Despite the low malignancy risk of the cyst, a high risk of ovarian torsion existed; therefore the MD recommended immediate surgery. One day S/P, athlete was asymptomatic and opted to continue play. She agreed that if significant signs and symptoms returned, surgery would be reconsidered. She completed the season without incident. The athlete returned home where she underwent laparoscopic surgery for removal of the mass. Two weeks post-surgery, the athlete reported no signs or symptoms with appropriate healing of the portal insertion sites. She has returned for her sophomore season with no anticipated complications. **Uniqueness:** Germ cell derived-teratomas always occur on the ovaries in females and the testes in males, while teratomas derived from embryonal cells occur anywhere throughout the body, with the most common being in the sacrococcygeal region. Overall, a teratoma constitutes a rare disease with approximately 10,000 new diagnoses per year worldwide; while ovarian dermoid cysts have an incidence of approximately 8.9 in every 100,000 women. Although this disease presented closely to appendicitis, a much more common disease, it is important to expand one’s differential diagnosis to be inclusive of any condition that may be indicated by common pain patterns. **Conclusion:** Many conditions can present in the body similarly with repetitive pain patterns. It is important for athletic trainers to continually educate ourselves in general medical conditions which are often overlooked due to the abundance of musculoskeletal injuries. Knowing the appropriate times to refer for further medical inquires becomes an integral part in the identification of such diseases that are a rarity. **Word Count:** 562