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Funiculitis mimicking appendicitis: A rare culprit

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ABSTRACT

Acute appendicitis is an extremely common cause for pediatric admissions, most notably presenting with right lower quadrant pain. There are few other etiologies for a young male to have pain aside from appendicitis. We present a young boy who presented with right lower quadrant abdominal pain and fevers, but was found to have funiculitis. Funiculitis, or inflammation of the spermatic cord, is a very rare condition in the pediatric population, almost always occurring in the elderly with urinary flow conditions. We share our case to remind providers the importance of a full differential diagnosis.

While acute appendicitis accounts for over 70,000 pediatric admissions annually, more unusual etiologies for right lower quadrant pain in children must be considered. In the pediatric male population especially, the differential is often quite small. Here we report a case of funiculitis mimicking appendicitis in a twelve-year old boy.

There are two reported cases of funiculitis in the Guthrie Clinic Bulletin, from 1956 including boys 3 years of age and 7 weeks of age, both secondary to infectious etiology [2]. Both cases presented with unilateral findings on exam. Additional pediatric cases of funiculitis found in the literature developed secondary to xanthogranulomatous disease, a non-neoplastic inflammatory lesion [3,4]. These children were thirteen and fourteen years of age. To our knowledge our patient is the youngest reported case of any type of funiculitis in the recent literature.

1. Case report

An otherwise healthy twelve-year old male presented to the emergency department at our institution with complaints of right lower quadrant abdominal pain for one day. He had experienced three episodes of vomiting and some mild anorexia prior to presentation. He was febrile to 38.8° Celsius and had a leukocytosis of 14,000 (cells/mm^3). Physical examination revealed tenderness in the right lower quadrant as well as inguinal region. Initial imaging studies included an ultrasound of the pelvis that did not visualize the appendix. A scrotal ultrasound revealed inflammation of the right spermatic cord without testicular torsion or any other associated abnormalities.

On further evaluation and exam, the patient had a firm, tender cord noted in the inguinal canal and a warm, tender right testicle and hemi-scrotum. A cat scan (CT) was then performed to rule out an Amyand hernia as the appendix was not definitively seen on ultrasound. The CT scan revealed a normal appendix in the usual position without evidence of any hernia (Fig. 1). Given these findings, a diagnosis of funiculitis, or inflammation of the spermatic cord, was reached.

Admission to the pediatric service with consult to urology was recommended. The patient was admitted to the hospital for observation. A urinalysis and culture revealed pan-sensitive *Escherichia coli*, and the patient was started on antibiotics. After he was afebrile for 24 h he was discharged home to complete a course of cephalexin. Follow up imaging two weeks after the diagnosis, demonstrated resolution of the previously inflamed spermatic cord.

2. Discussion

Acute appendicitis is a very common admission diagnosis in the pediatric population, with an incidence of 25 for every 10,000 children ages ten to seventeen [1]. There is a male to female ratio of 2:1 [1]. Despite, and indeed because of, the high incidence of appendicitis, a differential diagnosis must be developed to identify the appropriate management course for the patient. For example,

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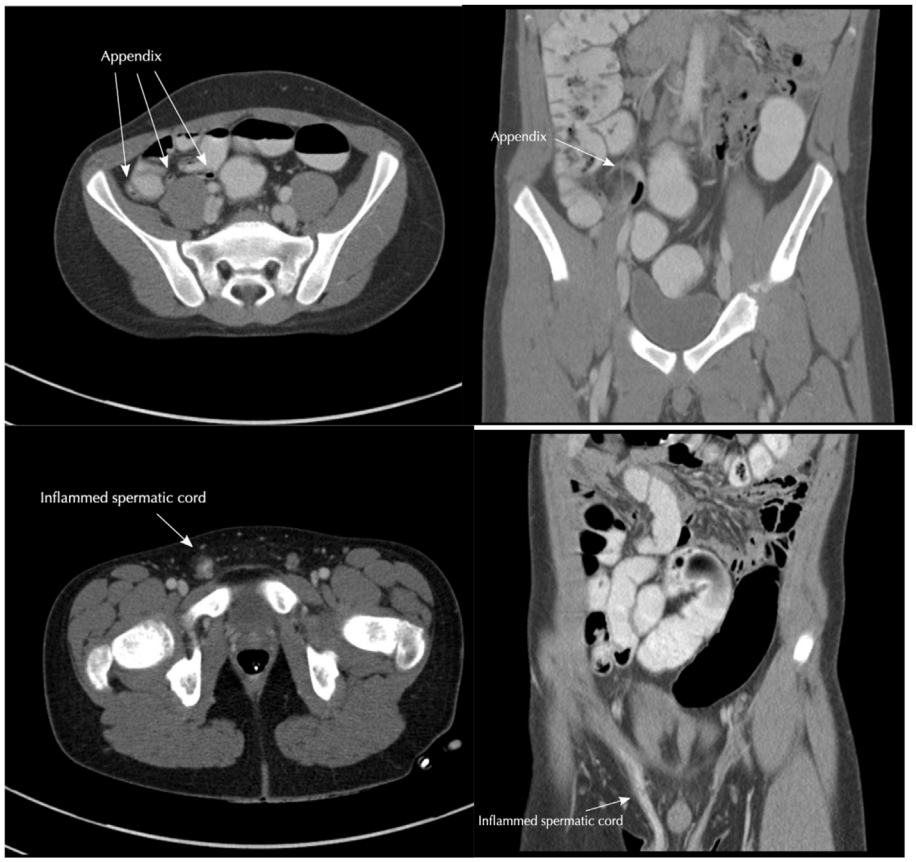

Fig. 1. Top row-axial and coronal images showing normal, air filled appendix curled near McBurney's point (denoted by arrow). Bottom row-axial and coronal images showing inflamed, hyperemic spermatic cord on the right (denoted by arrows), and normal spermatic cord on the left.

in female pediatric patients, ovarian pathology such as torsion may occasionally masquerade as appendicitis as these organs are intra-abdominal. The current case demonstrated a mimicker of appendicitis in a young male that is very rare in the literature and most often found in elderly males with urinary flow conditions. In concordance with most other funiculitis cases in the literature, regardless of age, funiculitis presents unilaterally, in this case with only right sided involvement. Our patient had no reported trauma, or urinary tract abnormalities discovered on interview that pointed towards this diagnosis. Additional considerations of genitourinary conditions that may mimic appendicitis in the young male include epididymitis, although rare, and testicular torsion. Testicular torsion is not only a painful condition but one that may threaten testicular viability if not recognized and treated.

3. Conclusions

While funiculitis may be unusual, it is worthwhile to keep all genitourinary diagnoses in mind when formulating a differential diagnosis for right lower quadrant pain in order to spare the patient the potential morbidity and expense of inappropriate treatment.

Conflicts of interest and sources of funding

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