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Case Report

Case Report: Acute Abdominal Pain in Girl during her Menstruation

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Abstract

This case report describes a 15-year-old female who presented with acute abdominal pain during end of her menstrual period, later diagnosed with acute appendicitis. Despite a relatively benign physical examination and absence of common symptoms like fever, vomiting or nausea, the patient's clinical presentation and laboratory results warranted further investigation, which led to an accurate diagnosis. This report emphasizes the importance of clinical examination and judgment, particularly in pediatric cases where symptoms may not always align with typical presentations.

Introduction with Literature Review

Acute appendicitis is a common surgical emergency, especially in children and adolescents [1,2]. Its typical presentation includes right lower quadrant abdominal pain which is usually migrated from periumbilical region, anorexia, nausea, vomiting, and fever[3]. However, clinical presentation can vary, and atypical cases are often seen in pediatric populations, leading to challenges in diagnosis and management.

As we know patients without an obvious alternative diagnosis may still have appendicitis, especially if signs or symptoms are of a short duration (<24 hours). For example, up to 2 percent of patients categorized as low risk by the paediatric appendicitis score and up to 7 percent of patients identified as low risk by the refined Low-Risk Appendicitis Rule ultimately have appendicitis.[4]

Studies show that the prevalence of appendicitis in children and teenagers is high, with an annual incidence of about 0.1% in children aged 5-14 years [5]. The diagnostic approach generally involves clinical examination, laboratory tests, and imaging modalities, with ultrasound being the most common imaging technique used for initial assessment in children [7]. A thorough physical examination and appropriate diagnostic imaging are critical in ensuring an accurate diagnosis and preventing complications associated with misdiagnosis or delayed treatment [6].

Case Description

A 15-year-old girl presented to the health center with complaints of new-onset acute abdominal pain for a few hours along with menstruation on going for last four days. The patient denied experiencing nausea, vomiting, urinary symptoms, fever, or other problems. She was not anorexic. She stated clearly that this is new onset pain and usually she doesn't have any pain in her periods after first day.

Her vital signs showed tachycardia with a heart rate of 132 beats per minute, while the rest of her parameters were within normal limits. On physical examination, her abdomen was soft and non-tender, with localized tenderness in the right iliac fossa, but there was no guarding, no rebound tenderness, or a positive Rovsing's sign. Her medical history was unremarkable, and there were no signs of systemic illness.

Laboratory tests revealed a white blood cell count of 15,000, indicating leucocytosis, but urine analysis was negative for infection, and C-reactive protein (CRP) was negative. Given the suspicion of acute appendicitis (PAS of 4) and the subtlety of her presentation, the patient was referred to secondary care for further evaluation and an Ultrasound scan of abdomen. An ultrasound abdomen was performed, which confirmed the diagnosis of acute appendicitis. The patient underwent a laparoscopic appendicectomy without complications and made an uneventful recovery.

Discussion

Acute appendicitis often presents with classic signs of right lower quadrant pain, fever, nausea, and vomiting. However, atypical presentations are particularly common in young adolescents, as seen in this case. The patient's complaint of localized abdominal pain, coupled with the elevated white blood cell count, suggested an inflammatory process, but the absence of fever, nausea, or vomiting made the diagnosis less straightforward [6].

In young patients, a careful and comprehensive physical examination is essential. Despite the relatively mild tenderness in the right iliac fossa and the absence of guarding or rebound tenderness, appendicitis remained a high clinical suspicion, prompting the decision for further imaging [7]. Ultrasound is a valuable diagnostic tool, especially in pediatric populations, as it avoids the risks associated with radiation exposure from CT scans and can effectively identify signs of appendicitis, such as an enlarged appendix or free fluid in the abdomen [7, 8].

Studies have demonstrated that a thorough history and examination, combined with timely imaging, significantly reduce the risk of misdiagnosis [5, 9]. The negative CRP in this patient highlights that inflammatory markers are not always elevated in appendicitis, and therefore, reliance on them alone for diagnosis can be misleading [6, 9]. This case underscores the importance of integrating clinical judgment with diagnostic imaging when assessing new onset acute abdominal pain in children and adolescents [10].

Learning Point

In young teenagers with a lower abdominal pain, a thorough and detailed physical examination is crucial. Despite the lack of significant findings on physical exam in this case, the patient's presentation was consistent with acute process. This highlights the importance of clinical judgment and careful assessment in identifying conditions like appendicitis, even in the absence of classic history or physical examination findings despite any coexisting condition. The use of ultrasound as a non-invasive, radiation-free imaging technique further supported the diagnosis and led to a timely surgical intervention [7].

Conclusion

Acute appendicitis should always be considered in the differential diagnosis of abdominal pain in children and adolescents, even in the absence of typical signs and symptoms. A high index of suspicion, coupled with thorough clinical assessment and appropriate imaging, is essential in ensuring accurate diagnosis and preventing delays in treatment. In this case, the prompt diagnosis and surgical intervention led to a favorable outcome, demonstrating the value of clinical vigilance in managing pediatric patients [5, 6, 7].

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