Acute Edematous Stump Appendicitis Diagnosed Preoperatively on Sonography

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Case Report

A 13-year-old girl presented with a history of abdominal pain associated with nausea, vomiting, and hyperthermia (38–39°C). She reported that the pain had started 15 days before the consultation and that it was increasing in intensity. At the time of the consultation, it was localized in the right lower quadrant and radiated to the right leg.

She mentioned having undergone appendectomy in another hospital 2 months before the current consultation.

Physical examination revealed guarding over the right lower quadrant during abdominal palpation. Signs of peritoneal irritation in the vicinity of the surgical scar were present.

Laboratory analysis showed leukocytosis with a left shift of the WBC (14,000/µL) with predominance of immature forms. Sonography showed increased thickness (8 mm) of the residual cecal appendix (Figs. 1A and 1B), two enlarged lymph nodes, and a small amount of fluid in the right iliac fossa.

At video laparoscopy, a residual appendiceal stump was found and removed (Fig. 1C).

Discussion

The inflammation of the appendiceal stump is a rare late complication after appendectomy. Its exact rate of incidence and its prevalence in the population are not accurately defined. A review of medical literature to this date has produced reports of only 15 cases of edematous stump appendicitis. Four of these are recent and occurred after laparoscopic appendectomy [4], whereas for the other it revealed the presence of an abscess in the form of an appendiceal stump [1]. In the other three cases, CT findings were not specific and revealed an ileocecal mass or pelvic abscess, and diagnosis was confirmed only during surgery.

In the patient reported here, sonography before surgery revealed the appendiceal stump with initial signs of edema of the mucosa. The changes observed were similar to those in acute edematous appendicitis but were found in a short segment of the cecal appendix. Sonography has become the method of choice for the diagnosis of acute appendicitis since Puylaert’s technique was...
adopted [8]. However, its usefulness in the identification of changes in the appendiceal stump has not been assessed before. In the patient discussed here, sonography proved capable of identifying initial inflammatory changes present in acute edematous stump appendicitis. We suggest, therefore, that early diagnosis of stump appendicitis may be made by sonography alone, as long as the examiner suspects this disease and is familiar with its sonographic findings. It is thus possible to avoid a delayed diagnosis or the use of more sophisticated examinations such as CT.

**References**


**Fig. 1.—** 13-year-old girl with abdominal pain and suspected appendiceal stump. 
A, Longitudinal sonogram shows appendiceal stump (arrows). Ceco = cecum. 
B, Transverse sonogram shows appendiceal stump (arrow). 
C, Photograph from video laparoscopy shows residual appendiceal stump (arrows).
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