

Short reports

Rectal examination and acute appendicitis

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SUMMARY A correct diagnosis of acute appendicitis was made in 90% of 103 children on the basis of history and abdominal findings. Preoperative rectal examination altered management only twice, and postoperatively was a poor indicator of pelvic sepsis.

The importance of rectal examination in the assessment of patients with possible acute appendicitis is always emphasised in surgical teaching. The practice of performing this examination on patients before discharge home after appendicectomy in order to detect pelvic sepsis is also common. The examination is upsetting for children, however, and the value of information gained both before operation and on hospital discharge is unclear. This study was performed to assess the value of rectal examination and the discomfort it causes.

Patients and methods

Children aged less than 14 years were studied prospectively over a period of three years in various hospitals. Those presenting with possible acute appendicitis were examined per rectum after admission to hospital. Findings were grouped under the following headings:

- (1) Tenderness to right or anteriorly;
- (2) The presence of a swelling or a mass;
- (3) Findings considered more important than abdominal signs.

The final diagnosis of appendicitis was based on the histology of the resected appendix. The diagnosis of non-appendicitis was based on (a) the histology of the appendix, on patients who underwent surgery, (b) the spontaneous resolution of symptoms without treatment, and (c) the identification of other specific conditions.

Patients who had undergone appendicectomy were examined again on the day they were deemed fit for discharge home. Findings were again grouped under the headings:

- (1) Tenderness,

- (2) Masses,
- (3) Any findings that changed the decision regarding the discharge of the patient.

When the examination was performed, both at the time of initial assessment and at the time of discharge home, an attempt was always made to differentiate between abnormal internal pain and tenderness from the discomfort of the procedure itself. The total discomfort each examination caused was quantified by observing the child's reaction to it. Patients were recorded as having,

- (a) Mild discomfort (facial grimacing or minor crying);
- (b) Severe discomfort (major crying or screaming);
- (c) Refused the examination.

Results

Discomfort. A rectal examination was attempted on 328 occasions, but proved impossible in five. Eighty children experienced severe and 121 minor discomfort during rectal examination at the time of hospital admission. At the examination before hospital discharge, severe discomfort was found in 34 and minor discomfort in 88 children.

Findings in acute appendicitis. Of the 103 examinations in children with histologically proved acute appendicitis, anterior or right sided tenderness, or both, were present in 55 and swelling in six. Although in nine children the rectal findings were considered more acute than the abdominal, in only two children did this alter management.

Findings in children without appendicitis. Twelve of 98 children who did not have appendicitis had rectal tenderness. In one of these, a child with acute salpingitis, the tenderness was more acute rectally than abdominally.

Before hospital discharge. One hundred and twenty two children were examined before discharge home after a mean hospital stay of four days. Anterior

tenderness was felt in 16, but none was considered to have evidence of early abscess formation and all were allowed home. Three patients, not among the 16, later returned with pelvic abscesses.

Discussion

Children find a rectal examination unpleasant and over a third experienced severe discomfort in this study. This is acceptable only if essential information affecting management is obtained. In this series, the diagnosis of acute appendicitis in over 90% of cases was made from the clinical history and abdominal examination. In two cases the rectal tenderness indicated the correct diagnosis. Rectal tenderness was present in 12% of children who did not have acute appendicitis. It seems reasonable, therefore, to omit routine rectal examination in children in whom the diagnosis of acute appendicitis is obvious from the history and abdominal signs. It remains essential, however, in those with acute

abdominal symptoms but with inconclusive or no abdominal signs. Pelvic appendicitis and abscess may yield very few abdominal signs. Our results show that the examination on discharge home seems to be a fruitless exercise; in no patient was any information gained that affected the decision already made that the child was fit to leave hospital.

We conclude from this study that:

- (1) Rectal examination is unpleasant for children;
- (2) The diagnosis of acute appendicitis in children may be made in over 90% of cases without rectal examination;
- (3) When the diagnosis is uncertain a rectal examination is sometimes useful to diagnose pelvic appendicitis or other pelvic pathology;
- (4) Rectal examination is a very poor early indicator of pelvic sepsis after appendicectomy.

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Intravenous immunoglobulin for neonatal isoimmune thrombocytopenia

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SUMMARY An infant with severe, isoimmune thrombocytopenia secondary to maternal anti-Pla 1 immunisation was treated successfully by intravenous gammaglobulin (400 mg/kg per day for five days). This treatment compared with Pla 1 negative platelet transfusions is discussed.

Materno-fetal incompatibilities in the Pla 1 system may lead to isoimmune neonatal thrombocytopenia and severe bleeding either in utero, during delivery, or in the first days of life. This condition is associated with a high risk of neonatal mortality or neurological sequelae secondary to intracranial haemorrhage.

Apart from performing a caesarean section to prevent obstetrical trauma, no preventive treatment has been available until recently. Exchange transfusions or transfusions with Pla 1 negative platelets in cases of severe postnatal bleeding or as a preventative measure have provided only temporary benefit.¹ Neonatal thrombocytopenia, however, will

resolve spontaneously over a period of three to four weeks, indicating the progressive decrease of maternal antibodies in the infant's circulation.

In over 50% of children with idiopathic thrombocytopenic purpura high dose intravenous gammaglobulin has been shown to increase the platelet count to normal values within a short period. This treatment has subsequently been used in neonatal thrombocytopenia related to maternal idiopathic thrombocytopenic purpura.

We report an infant with isoimmune neonatal thrombocytopenia treated with intravenous gammaglobulin.²

Case report

A 2 hour old boy weighing 2350 g was referred to our hospital with thrombocytopenia. He was the second child of a 23 year old woman, whose 38 week pregnancy, labour, and delivery had been uncomplicated. The mother's platelet count was normal at delivery. Her first born infant, a girl, had been thrombocytopenic at birth; this had been attributed