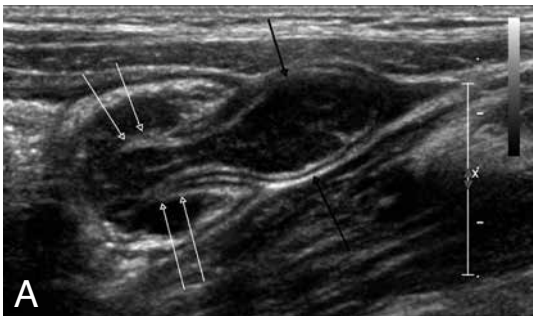
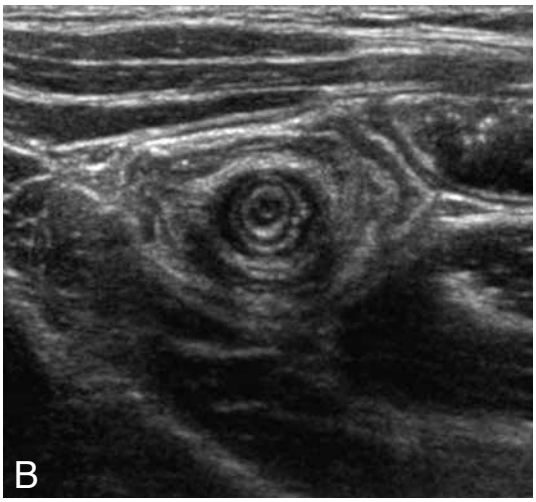
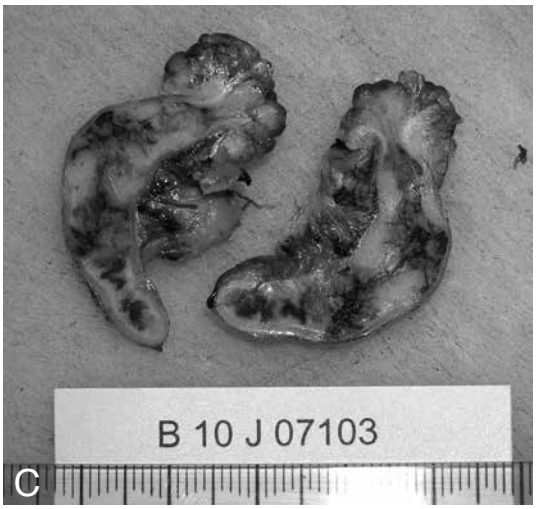
JBR–BTR, 2013, 96: 93.

IMAGES IN CLINICAL RADIOLOGY







Appendicular intussusception with lymphoid hyperplasia

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A 4-year-old boy is sent to paediatric consultation for night-recurring abdominal pain of 3 weeks duration.

Clinical examination reveals a moderate pain to deep palpation of the right iliac fossa. The rest of the clinical examination is unremarkable.

Ultrasound (US) shows a slightly swollen 7 mm transverse diameter appendix, electively sensitive. Swelling is the result of hypoechogenic submucosal layer thickening, attributed to lymphoid hyperplasia of the appendicular walls (Fig. A, black arrows). In addition, the mean portion of the appendix appears intussuscepted in its distal portion (Fig. A, white arrows) and made protrusion in the cecum, generating a target image (Fig. B). The proximal portion of the appendix is nodular and the end portion is normal (Fig. A). The ileocecal valve is well individualized and is normal.

Blood biology proves to be normal. US performed 10 days later finds the same aspect.

Due to the persistence of symptoms, surgery by laparoscopy is performed.

The surgeon confirms intussusception but feared the presence of anappendiceal tumor on the basis of the swollen and appendix nodular aspect.

Histological analysis finds important lymphoid hyperplasia of the appendiceal wall. No tumor process is found (Fig. C). Operating suites are uneventful and painful symptoms disappeared completely.

Comment

Intussusception of appendix (IA) in children remains a very rare condition, with an incidence estimated at 0.01% in children, and occurring most often in the first decade of male children preferentially. The clinical presentation is highly variable and non-specific, combining abdominal pain and nauseas.

In recent years, US diagnosis has been more common in the pediatric population but remains hazardous and diagnosis by CT, endoscopy or barium enema is still describedt. The main reason is confusion with the diagnosis of ileocecal intussusception and in most reported cases, an attempt to reducing of ileocecal intussusception by enema before surgery is mentioned.

The causes of IA can be multiple and are mostly described in adults. The appendix is an organ rich in lymphoid tissue which can be in hyperplasia. Appendicular lymphoid hyperplasia is well known but observation with US in combination with an IA has never been reported.

We hypothesize that lymphoid hyperplasia has been the cause for intussusception at the start of contractions of the cecum.

Surgery is recommended to amend pain and especially to avoid secondary colonic intussusception, which is described as a complication of the IA.

In conclusion, this case illustrates the need for careful analysis of the ileo-caecal junction in diagnosis of ileocecal or appendiceal intussusception. It also demonstrates for the first time the US appearance of appendiceal intussusception with lymphoid hyperplasia.

Reference

1. Koumanidou C., Vakaki M., Theofanopoulou M., et al.: Appendiceal and appendiceal-ileocolic intussusception: sonographic and radiographic evaluation. *Pediatr Radiol*, 2001, 31: 180-183.

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