

## Contribution of the virtual colonoscopy in a case of intestinal intussusception

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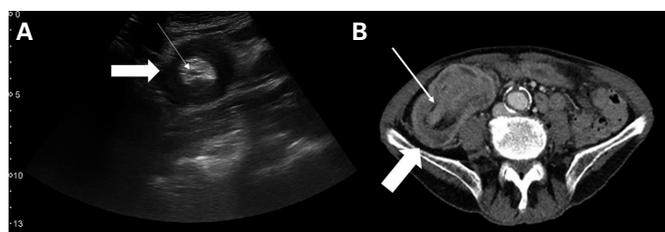
### CASE REPORT

A 79-year-old male presented to the Emergency Department with abdominal pain of a 24 hour duration and hematochezia. An abdominal ultrasound (Fig. 1) showed a stratified rounded image in the right iliac fossa (Fig. 1A). An intestinal intussusception was suspected and a computed tomography (CT) scan was performed which identified a segment of the ileum in an adjacent colonic segment caused by an ileocecal intussusception (Fig. 1B).

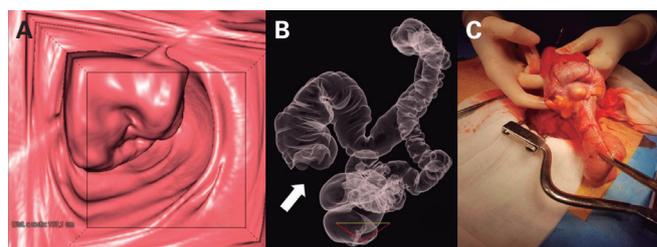
There was no evidence of complications and therefore, the patient was treated conservatively. After discharge from hospital, a colonoscopy was attempted but could not be completed. A virtual colonoscopy was subsequently performed (Fig. 2) and a cecal mass that was pulling the ileum was identified. The presumed cause of the intussusception was a cecal neoplasm. An oncological surgical procedure was carried out and the pathological analysis of the surgical specimen identified a pT2 pN0 pMX adenocarcinoma.

### DISCUSSION

Ultrasonography and CT are highly sensitive for the preoperative diagnosis of intestinal intussusception (1), as was the case in our patient. However, the sensitivity is too low in order to define whether an underlying lesion is acting as a lead point or an apex of the intussusceptum as well as its associated



**Fig. 1.** A. Abdominal ultrasound showing the ileocecal intussusception as a multilayer rounded image. This consists of an external hypoechoic rim corresponding to the colon wall (thick arrow) with the hyperechoic invaginated mesentery in its lumen and a central hypoechoic area corresponding to intussuscepted ileal loop (thin arrow). B. Abdominal contrast-enhanced CT scan showing the invaginated ileal segment (thin arrow) penetrating into the colonic lumen (thick arrow).



**Fig. 2.** A. Virtual colonoscopy image showing an endoluminal 3D view with a mass in the colonic lumen. B. Virtual colonoscopy 3D luminogram showing the cecal wall retracted by the mass, acting as a lead point or an apex of the intussusceptum (arrow). C. Surgical image showing the invaginated ileum being pushed by the mass into the colon.

characteristics. All of these are important in order to define an appropriate treatment. Colonoscopy is the gold-standard examination technique but could not be attempted or completed in this case. In such cases, virtual colonoscopy is a validated alternative that is recommended by different clinical guidelines due to its very high sensitivity for lesions greater than 1 cm (2). Nevertheless, sensitivity is low for smaller or flat injuries. This technique is highly superior to a barium enema and has currently superseded the latter approach in the case of an incomplete or contraindicated colonoscopy (3).

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