Endoscopic ultrasound diagnosis of pneumatosis cystoides coli initially misdiagnosed as colonic polyps

An 85-year-old lady with chronic abdominal pain underwent a colonoscopy, which showed flat, spreading polypoidal lesions in the descending colon, and she was consequently referred for endoscopic mucosal resection (EMR). A repeat colonoscopy (Pentax EC 38-i10 L) demonstrated multiple polypoidal lesions of varying sizes (3 mm – 3 cm), which were apparently interconnected, in the descending colon (Video 1). The mucosa was of normal appearance on white-light endoscopy and also on i-scan with a Kudo's pit pattern type I. These features raised the suspicion of pneumatosis cystoides coli (PCC) and a radial endoscopic ultrasound (EUS; Pentax EG 3670 URK) confirmed this by showing multiple hyperechoic air pockets in the third wall layer of the descending colon (Video 2). A computed tomography (CT) scan performed to rule out other malignant disease subsequently also demonstrated air-filled cysts in the wall of the colon (Fig. 3).

PCC is an uncommon condition in which submucosal and subserosal gas cysts are present within the bowel wall [1]. It can easily be mistaken for colonic polyps or submucosal tumors. Endoscopic resection of such lesions may be risky as it may cause colonic perforation and should therefore be avoided. Mucosal biopsies yield normal colonic epithelial cells. Complete cyst collapse can be achieved by puncturing the cysts with an injection needle. CT scan can confirm the diagnosis, although the disadvantages of this investigation are radiation exposure and the...
cost involved. Occasionally the air-filled
cysts can be thought mistakenly to be
intraluminal air and therefore can be
missed by CT scanning [2]. Pneumatosis
linearis, which is associated with bowel
necrosis and ischemia, also presents with
air in the layers of the intestinal wall.
However, in this condition the mucosa is
abnormal [3].
EUS shows multiple hyperechoic air pock-
ets in layer three with acoustic shadowing
that obscures the outer wall layers [4]. Its
advantages are that it can be performed in
the same session (as in our case) and there
is no radiation exposure involved.
In summary, PCC can be easily mistaken
for colonic polyps and EUS is a useful test
to confirm the condition when it is sus-
ppected during colonoscopy.

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Competing interests: None

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