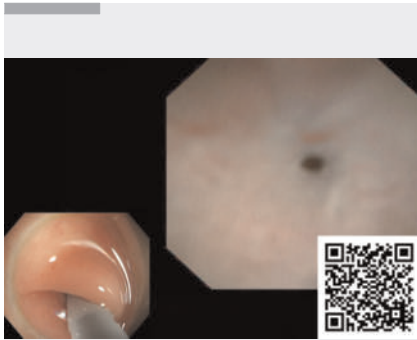


## Cholangioscope-assisted endoscopic retrograde appendicitis therapy for occult chronic appendicitis

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▶ **Video 1** Cholangioscope-assisted endoscopic retrograde appendicitis therapy is performed for occult chronic appendicitis with a pinhole-like stenosis and suppuration.

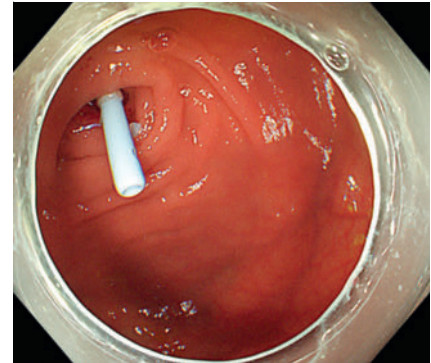
In recent years, endoscopic retrograde appendicitis therapy (ERAT) has been widely used in the treatment of acute uncomplicated appendicitis, especially with the assistance of cholangioscopy [1,2]; however, the diagnosis and treatment of chronic appendicitis has always been a challenge. Chronic appendicitis is often overlooked owing to atypical symptoms and unclear imaging changes [3]. We report a case of recurrent unexplained lower right abdominal pain. Through cholangioscope-assisted ERAT, the patient was diagnosed as having chronic appendicitis with a pinhole-like stenosis and suppuration, adequate drainage was performed, and the abdominal pain was completely relieved.

A 35-year-old woman presented with recurrent lower right abdominal pain for 6 months. Computed tomography (CT) showed her appendix to be normal. After the patient had given informed consent, a cholangioscope-assisted ERAT procedure was performed (▶ **Video 1**). Colonoscopy showed no abnormalities in the appendix. A cholangioscope was inserted into the appendiceal cavity, where scattered mucosal congestion and a pinhole-like ste-

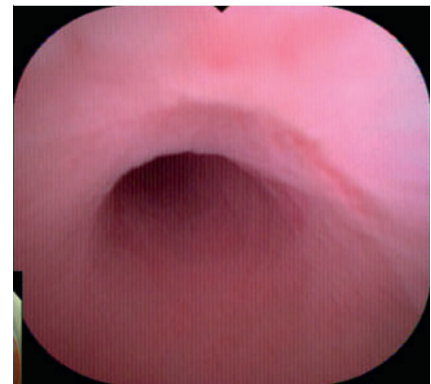


▶ **Fig. 1** Cholangioscopic view of the appendix showing: **a** a pinhole-like stenosis near the blind end of the appendix; **b** a large amount of pus flowing from the stenosis after insertion of the guidewire; **c** the anterior end of the cholangioscope successfully dilating the stenosis with guidewire guidance.

nosis were observed (▶ **Fig. 1 a**). A guidewire was inserted through the stenosis, releasing a large amount of pus that was seen to flow out through the stenosis (▶ **Fig. 1 b**). The anterior end of the cholangioscope was used to dilate the stenosis (▶ **Fig. 1 c**). The cholangioscope was successfully passed through the stenosis to the blind end of the appendix and, after washing out the pus, a biliary plastic stent was placed (▶ **Fig. 2**). Postoperatively, the patient's refractory abdominal pain completely disappeared.



▶ **Fig. 2** Colonoscopic view showing a biliary plastic stent that was successfully placed into the appendix after the pus had been washed out.



▶ **Fig. 3** Follow-up cholangioscopic appearance after 7 months showing smooth appendiceal mucosa, with the stenosis no longer visible.

At follow-up after 7 months, the patient reported having had no further abdominal pain. The stent was removed colonoscopically. Repeat examination of the appendix with a cholangioscope showed the mucosa was smooth and the stenosis had disappeared (▶ **Fig. 3**).

Cholangioscope-assisted ERAT may be a very effective and safe way to diagnose and treat occult chronic appendicitis.

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## Conflict of Interest

The authors declare that they have no conflict of interest.

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