

Endoscopic ultrasound-guided gastrojejunostomy with a Nagi stent for relief of jejunal loop obstruction following hepaticojejunostomy



Fig. 1 Contrast-enhanced computed tomography (CT) scan of the abdomen showing a dilated loop of jejunum with an intact hepaticojejunostomy anastomosis.

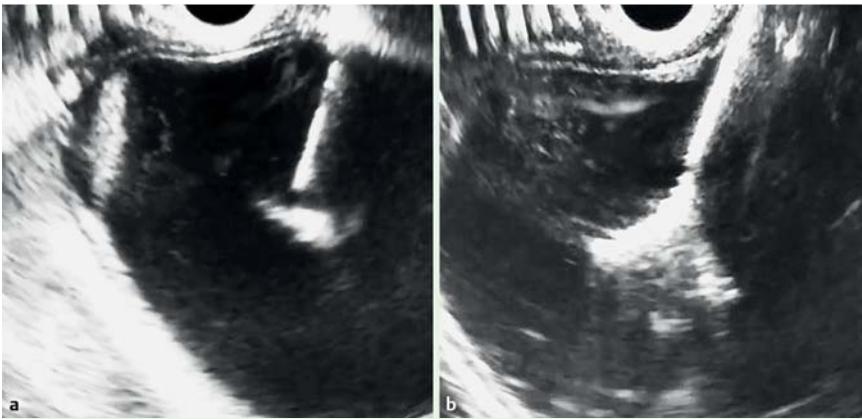
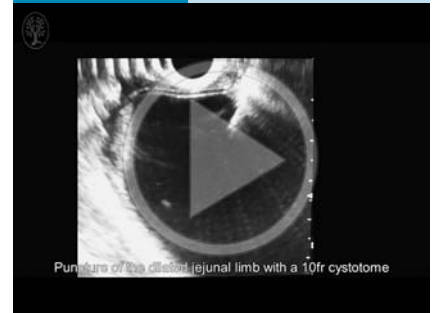


Fig. 2 Endoscopic ultrasound (EUS) images showing: **a** the puncture of the dilated jejunal loop with a 10-Fr cystotome; **b** the Niti-S Nagi stent being deployed over the wire.



Fig. 3 Endoscopic views showing: **a** the Niti-S Nagi stent in position allowing free flow of bile across the gastrojejunostomy; **b** a 7-Fr double-pigtail plastic stent (7 cm in length) that has been inserted through the stent to prevent migration.

Video 1



Radiographic and endoscopic views of the dilated jejunal loop being punctured, a Nagi stent being positioned across the gastrojejunostomy, with a double-pigtail stent positioned through it to prevent migration.

A 27-year-old man with unresectable periampullary neoplasm underwent a Roux-en-Y hepaticojejunostomy with gastrojejunostomy 1 year previously. He presented with a 1-month history of progressive yellowish discoloration of his eyes, abdominal pain and distension, and intermittent high fever with chills and rigors. On admission his results showed a bilirubin of 9 mg/dL, alkaline phosphatase of 1467 IU/mL, and total white blood cell (WBC) count of 28 700/mm³. A blood culture grew *Escherichia coli*. A contrast-enhanced computed tomography (CT) scan of the abdomen showed a grossly dilated loop of jejunum with distal obstruction, in communication with a patent hepaticojejunostomy anastomosis (Fig. 1).

We planned to decompress the jejunal loop to relieve the cholangitis; however, the presence of a distal obstruction precluded enteroscope-assisted drainage. The distended jejunal loop was punctured with a 10-Fr cystotome (Cook Medical, Winston-Salem, North Carolina, USA) using endoscopic ultrasound (EUS) guidance (Fig. 2a). The needle was removed and a 0.035-inch guidewire was placed through the inner catheter into the jejunal loop. The over-the-wire 10-Fr outer catheter of the cystotome with a diathermic ring was advanced into the jejunal loop using pure cut (Video 1). The cystotome was then removed. A 30-mm Niti-S Nagi stent (Taewoong Medical, Seoul, South Korea)

was placed across the tract between the stomach and jejunal limb (► Fig. 2b), and bile was seen to drain through the gastro-jejunal anastomosis (► Fig. 3a). To prevent migration of the stent, a 7-Fr double-pig-tail plastic stent (7cm in length) was placed across the Nagi stent (► Fig. 3b). After the procedure the patient's fever subsided, his bilirubin decreased to 3.1 mg/dL, his total WBC count decreased to 15200/mm³ and he was moved from the intensive care unit. He was discharged from hospital after 15 days. Obstruction of the jejunal loop can occur as a late complication of hepaticojejunostomy due to either adhesions or tumor recurrence. EUS-guided gastrojejunostomy for afferent-loop syndrome using a Hot Axios stent was first described by Ikeuchi et al. in 2015 [1]. Mutignani et al. recently used the Nagi stent to gain access to the jejunal loop in a patient with an hepaticojejunostomy [2]. In our patient, we used the Nagi stent to decompress the obstructed jejunal loop. The procedure appears to be a safe alternative for the management of patients with hepaticojejunostomy presenting with cholangitis secondary to jejunal loop obstruction.

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Bibliography

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