

# EUS-guided Choledochogastrostomy using the Hot AXIOS™ Stent and Electrocautery Enhanced Delivery System\* for the Management of Symptomatic Cholecystitis in a Non-surgical Candidate



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## technique spotlight

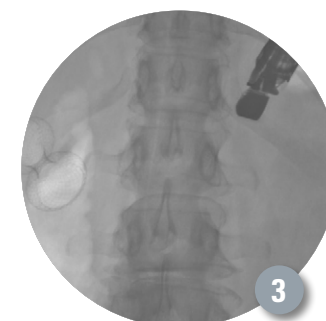
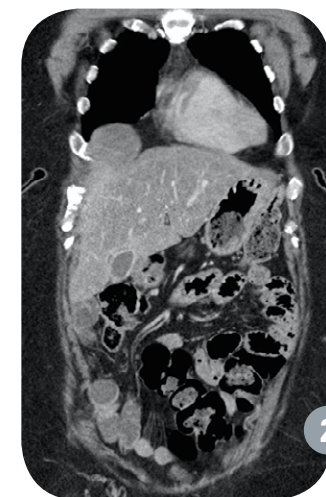
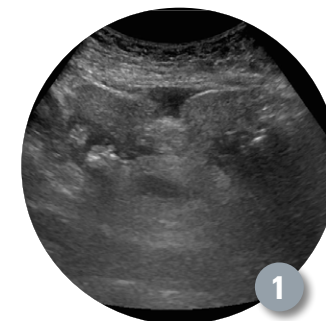
### Patient History

A 53-year-old female presented with recurrent right upper quadrant pain and a fever which resulted in several admissions to hospital for intravenous antibiotics over a 12 month period. Imaging via ultrasound (Figure 1) and MRI confirmed a thickened gallbladder with stones, consistent with chronic cholecystitis. The intra and extrahepatic bile ducts were not dilated.

The patient had multiple comorbidities, including peritoneal carcinoma, necessitating a debulking right hemicolectomy in July 2013 and subsequent chemotherapy, type 1 diabetes on an insulin pump, sensorineural hearing loss, hypertension, asthma and was on long-term anticoagulation for previous pulmonary emboli. Due to her previous abdominal surgery she had a large incisional hernia and complex abdominal adhesions, which in addition to her medical comorbidities, meant she was assessed to be a very high-risk surgical candidate. The episodes of cholecystitis began to occur more frequently, so she was discussed at our benign HPB MDT where it was decided that she could be managed by EUS-guided choledochoduodenostomy. A suitable window of access to the gallbladder from the upper GI tract was seen on the pre-procedural CT (Figure 2).

### Procedure

EUS-guided choledochoduodenostomy with the Hot AXIOS Stent and Electrocautery Enhanced Delivery System was undertaken with the patient under propofol sedation in the left lateral position. A therapeutic linear echoendoscope was passed in to the duodenal bulb and on withdrawal a good view of the gallbladder was obtained from the duodenal bulb. The gallbladder was punctured freehand with the Hot AXIOS Stent and Electrocautery Enhanced Delivery System's catheter from the bulb from a position where the gallbladder was seen sonographically to be less than 5mm away from the mucosal wall. Following the puncture the 15mm Hot AXIOS Stent and Electrocautery Enhanced Delivery System was deployed. With EUS guidance the distal flange was confirmed to be in a good position at the gallbladder



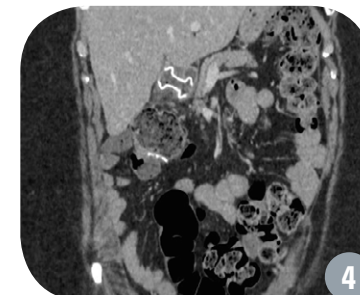
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wall and endoscopically the proximal flange was clearly seen flaring in the duodenal bulb with clear bile draining. The correct position of the stent was also confirmed fluoroscopically (Figure 3).

## Outcome

Following the EUS procedure, the patient was recovered and admitted overnight for observation. A CT scan was performed the following day which confirmed the correct position of the stent (Figure 4) with no evidence of associated biliary leak or perforation. The patient began eating and drinking the next day and was discharged home a day later and completed a week's course of oral antibiotics.



Three months later she returned for a further gastroscopy under propofol sedation with the aim of removing or treating the gallbladder stones if required. A paediatric gastroscope was used to cannulate the HOT AXIOS Stent and Electrocautery Enhanced Delivery System and enter the gallbladder. On entering the gallbladder two solid lumps of possible food rather than discrete calculi were seen and removed with a Roth Net™. The cystic duct was patent with bile seen entering gallbladder endoscopically. As no stones remained in the gallbladder the lumen apposing stent was removed with stent grabbers. There was no bleeding from the defect seen endoscopically and air shadows looked normal on fluoroscopy. She was admitted for observation and discharged home the day later. After 6 months of follow up she reports feeling well with no further episodes of biliary colic or cholecystitis.

## Conclusion

In patients with symptomatic cholecystitis from gallstones where surgical resection is not possible, EUS guided choledochoduodenostomy with the Hot AXIOS Stent and Electrocautery Enhanced Delivery System appears to be a safe and effective alternative treatment.

The AXIOS Stent and Delivery System and the AXIOS Electrocautery Enhanced Stent and Delivery System Indications for Use:

Europe: The HOT AXIOS Stent and Electrocautery Enhanced Delivery System & the AXIOS Stent and Delivery System are indicated for use to facilitate transgastric or transduodenal endoscopic drainage of a pancreatic pseudocyst or a walled-off necrosis with >70% fluid content or the biliary tract.

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