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Successful Hepaticogastrostomy (HGS): Decompression when all Else had Failed

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Keywords

Hepaticogastrostomy; Biliary; Decompression; ERCP; Endoscopic ultrasound

Case Presentation

We describe the case of an 82 year old man with jaundice (bilirubin 319 μ mol/L) from pancreatic cancer who had recurrent biliary obstruction despite 2 previous endoscopic retrograde cholangiopancreatography (ERCP) and metal stent insertions. He also underwent Hot AXIOS (Boston Scientific) stenting into the gall bladder from the stomach (cholecystogastrostomy) but because of concentrated mucinous bile, the cystic duct failed to drain (Figure 1 and 2).

The decision was made to drain via a hepaticogastrostomy (HGS). Endoscopic ultrasound (EUS) guided insertion of a VisiGlide guidewire (Olympus) through a 22-gauge Aquire™ aspiration needle into the left intrahepatic duct (IHD) was performed under fluoroscopic guidance. The injection of contrast confirmed pacification of the biliary system. A 4mm Hurricane Balloon (Boston Scientific) dilated the tract an 8x80 mm Niti-s covered stent (Taewoong Medical) was inserted followed by a gush of bile into the stomach. Bilirubin fell to 65 μ mol/L and over the next fortnight he improved enough to be discharged home (Figure 3).

Discussion

EUS-guided biliary drainage (EUS-BD) is indicated where ERCP has failed or where percutaneous transhepatic cholangiography (PTC) is not a preferable option, such as in cases with ascites or where an external tube might be pulled out. EUS-BD can be either trans-duodenal or trans-gastric (HGS) if there has been previous Roux-en-Y surgery or duodenal obstruction [1].

Hilar obstructions are a contraindication given the fact that passing a stent into the left IHD, will not allow the right ductal system to drain. However, right IHD stenting has been reported [2]. EUS-BD is preferred to PTC for small volume ascites, but is contraindicated in larger volume ascites.

Balloon dilatations can be performed in a graded fashion. However, a 1-step stent placement technique using a novel metal stent with a 3 Fr tip 4 Fr tapered introducer avoids the need for dilatation [3]. Covered metal stents are preferred to plastic ones due to reduced biliary leaks and longer stent patency.

When comparing EUS-BD to PTC, technical success rates are 86% versus 100% respectively

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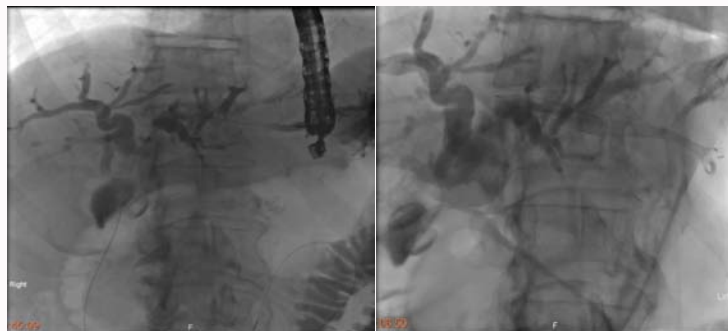


Figure 1 and 2: The left cholangiogram shows the insertion of a wire using the EUS scope into the left ductal system with biliary opacification using gastrofrafain contrast. The right image shows the insertion of the insertion of the stent from the stomach into the left intrahepatic duct with good drainage. Both also show the previously inserted Hot AXIOS cholecystogastrostomy.

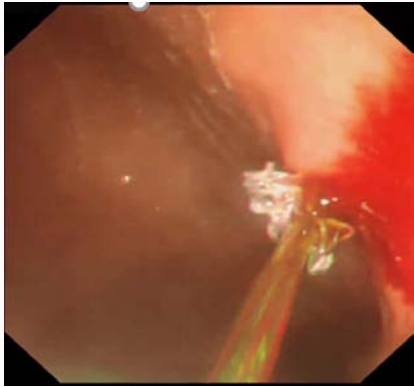


Figure 3: This shows the endoscopic image of the stent insertion and gush of bile into the stomach.

[4]. However, both decompression and stent patency were identical. Adverse events were more common in the PTC group (70.6 versus 19.2%). Adverse events for EUS-HGS included bleeding, pneumoperitoneum, and biliary peritonitis. Stent migration is also a risk and can be overcome using stents greater than 10cm or pigtail stent insertions through the FCSEMS to anchor it in place.

Conclusion

This case is an excellent example of how HGS can obtain successful biliary drainage for a palliative patient where ERCP has failed, without the risks associated with PTC and the discomfort of having an external drain.

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