



ENDOSCOPIC COIL EMBOLIZATION OF POST-TRAUMATIC BILIARY FISTULA

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Introduction:

Biliary fistula is defined as an abnormal communication between the biliary tract and other organs or cavity. The formation of biliary fistula can be due to existing gallstone diseases, complications including bile leaks following hepatobiliary surgery or blunt liver trauma. Although the incidence of biliary fistula is rare, it can lead to significant morbidity and mortality. Some of the complications of biliary fistula include bile peritonitis, biloma, liver abscess and sepsis, with mortality rates up to 40-50%.

Conclusion:

This case describes endoscopic coil embolization as an effective alternate modality for managing refractory bile leaks following liver trauma. It should be considered as the next step in the treatment algorithm of refractory bile leak that does not resolve with endoscopic biliary stenting.

Discussion:

Different strategies can be used to treat post traumatic biliary fistula.

ERCP with sphincterotomy and biliary stenting has been reported to be successful to treat biliary fistula, with rate of success between 99 -100%.

Percutaneous transhepatic drainage (PTBD) was conventionally considered as the main treatment for post traumatic biliary fistula before ERCP was made available.

Endoscopic coil embolisation was first introduced in 1990 with the use of pledget. Recent advances have introduced the use of **coil as an embolic agent** for the treatment of biliary fistula.

References:

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2. Krige J, Bornman P, Beningfield S, et al. Endoscopic embolization of external biliary fistulae. *Br J Surg*. 1990;77(5):581-3



Figure 1 - Endoscopic retrograde cholangiopancreatography showed contrast leak from segment VIII intrahepatic duct

Case Report:

We present a case of a 22-year-old young gentleman with AAST grade V liver injury complicated with bile leak at segment VIII following blunt abdominal trauma. Initial attempts using ERCP with biliary stent failed to treat the bile leak. Following an MDT discussion, the refractory bile leak was successfully managed an endoscopic coil embolisation to the segment VIII intrahepatic duct.

Post endoscopic coil embolisation, contrast leak from the segment VIII was not longer demonstrable [Figure 2] and a repeated CT scan one week later showed resolution of Segment VIII collection [Figure 3].



Figure 2 - Cholangiogram image showing coil deploy at segment VII intrahepatic duct with no more contrast leak following coil placement

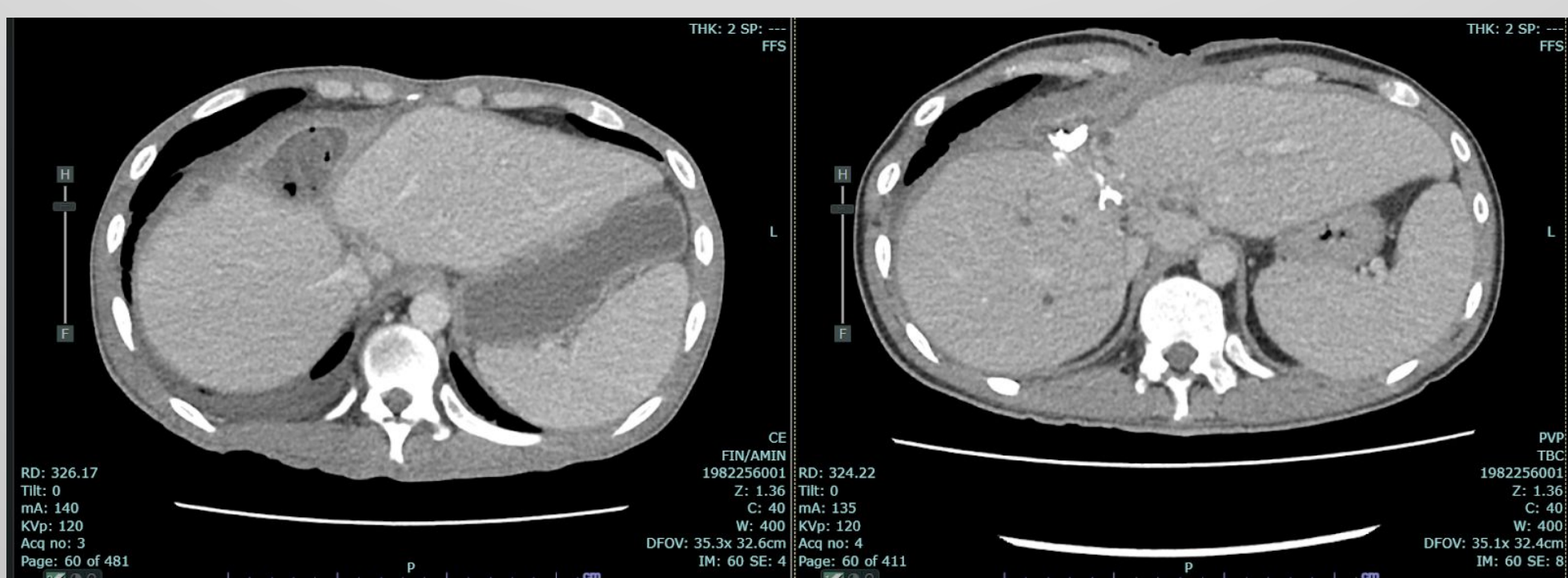


Figure 3 - Left: pre-intervention computed tomography image showed a collection at the segment VIII region; Right: CT image showed resolution of the collection following endoscopic coil embolization