



AB005. S1-4. What is the best approach for biopsy and stenting hilar cholangiocarcinoma?

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Abstract: Hilar strictures are narrowings at the bifurcation of the right and left hepatic duct, and are most commonly caused by malignant etiologies, specifically cholangiocarcinoma. When malignancy is suspected, the case should be discussed in a multi-disciplinary setting to assess whether the patient is a candidate for surgical resection or liver transplant. Among the diagnostic armamentaria are endoscopic retrograde cholangiopancreatography (ERCP)-guided brushing and biopsy, intraductal ultrasound (IDUS), endoscopic ultrasound (EUS)-guided biopsy, cholangioscopy, probe-based confocal laser endomicroscopy (pCLE), and optical coherence tomography. Regrettably, these diagnostic modalities are plagued by poor sensitivity and accuracy as the tumor spreads in an infiltrative manner rather than forming a mass in the bile duct, yielding minimal tissue when attempting tissue acquisition. The pooled sensitivity of ERCP-based brushings is 0.45, and of forceps biopsy is 0.48. The accuracy of IDUS is 88% and that of IDUS with tissue sampling 97%. Cholangioscopy allows direct visualization of the lumen of the bile duct, but the sensitivity in obtaining tissue diagnosis in malignant biliary strictures is still meager at 60%. pCLE has an

accuracy of 45–79% for indeterminate biliary strictures, but has a difficult time in being accepted as the gold standard in place of tissue diagnosis. EUS-fine needle aspiration (EUS-FNA) has a sensitivity of 25–89% for hilar strictures, but in potential surgical candidates, the methods of obtaining a tissue diagnosis should be carefully reviewed and planned as tumor seeding via FNA may convert the resectable stage to an unresectable stage. In parallel with advances in diagnostic techniques, there have been improvements in histological techniques including fluorescent-in-situ hybridization (FISH), DNA sequencing, and immunohistochemical staining. FISH has an accuracy of 70%, but when combined with cytology, the accuracy is improved to 77%. The role of pre-operative biliary drainage should be individualized based on clinical presentation and timing of surgery. In unresectable hilar strictures, either percutaneous or endoscopic biliary drainage may be performed. Endoscopic biliary drainage can be done with the placement of plastic or self-expanding metal stents, with more recent evidence supporting the use of SEMS, albeit in selective patients only. The decision to perform unilateral or bilateral drainage should factor in liver volume and a goal of draining at least 50% of liver volume should be sought. It is paramount to avoid injection into a liver segment where drainage is not possible, in order to avoid causing cholangitis and later an abscess formation, which will result in a shortened survival. Overall, the clinician should take into account multiple aspects including patient factors, anatomy, etiology, stricture location and endoscopic familiarity when treating hilar strictures. In this lecture, we will delve into the intricate details of how best to manage a hilar stricture.

Keywords: Hilar; plastic; percutaneous; stricture; self-expanding metal stent; bilateral

Cite this abstract as: Lee JH. What is the best approach for biopsy and stenting hilar cholangiocarcinoma? *HepatoBiliary Surg Nutr* 2019;8(Suppl 1):AB005. doi: 10.21037/hbsn.2019.AB005