South African Journal of Gastroenterology and Hepatology. 2024;01(2):58-59
https://doi.org/10.36303/SAJGH.0932

SAJGH
ISSN 3078-1779

CASE REPORT

Short clinical case: the indeterminate biliary stricture

M Brand

Head of HPB Surgery, Steve Biko Academic Hospital, University of Pretoria, South Africa
Corresponding author, email: *martin.brand@up.ac.za*

Keywords: endoscopic ultrasound, ERCP, cholangiocarcinoma, biliary stricture

Case presentation

A 59-year-old male presented with vague symptoms of right upper quadrant pain. He provided a history of having undergone three endoscopic retrograde cholangiopancreatographies (ERCPs) in the last 14 months, the last being eight months prior to his presentation. He stated that he had had his first onset of jaundice 14 months ago and the doctor had placed a stent to relieve an obstruction. He was not sure what the investigations were, but he said the doctor told him not to worry, all was OK.

Apart for the one episode of jaundice, he had no medical history and took no chronic medications. He had no previous surgical history, no relevant family history, there was no atopy or auto-immune disease in the family, no inflammatory bowel, and no known liver disorders. He had no known allergies.

Clinical examination revealed a healthy patient, no signs of weight loss, no jaundice, no anaemia or lymph adenopathy. His abdomen was scaphoid, soft, non-tender, no masses were palpable.

Discussion with the doctor who had performed the ERCPs disclosed that their opinion was that of a benign distal common bile duct stricture and their plan was for serial dilatations. Their opinion was based on the appearance of the stricture, described as a smooth, tight stricture with no shouldering. Two brush cytologies had both come back with normal biliary epithelial cells. The patient's clinical history was unremarkable.

Blood investigations repeated on two occasions following the first ERCP and stenting indicated a normal full blood count and differential; normal ESR; liver function test had normalised; CA19-9 was 0 units/milliliter and CEA was 1.2 ng/ml. The doctor supplied an ERCP image from the third ERCP, noting the dumbbell shape of the hurricane balloon. A fully covered self-expanding metal stent was placed at this procedure. No further investigations had been requested.

We performed an endoscopic ultrasound (EUS) which demonstrated a mass around the distal common bile duct and two enlarged periductal lymph nodes. Core biopsy of both the mass as well as lymph node came back as adenocarcinoma. A staging triphasic abdominal CT scan confirmed the EUS findings; the lesion was resectable and there was no metastatic disease.

A pancreaticoduodenectomy was performed and the histology came back as a distal CBD cholangiocarcinoma, T2, N1, Mx, Stage IIB.

The patient has been referred for chemotherapy.

Discussion

This is an example of an initially diagnosed indeterminate stricture believed to be benign, which was, however, a cholangiocarcinoma.

Taking into consideration that this patient had no identifiable risk factors for a benign biliary stricture, and together with his age, further investigations to determine whether it truly was a benign stricture should have been undertaken. Not uncommon traps are the return of normal biliary epithelial cells with brush cytology at ERCP. The sensitivity is approximately 60% with a negative predictive value of 50%,[1] and much lower after a stent has been present across the stricture. The second trap in this case was the CA19-9 value of 0 units/milliliter, effectively undetectable. This should be interpreted as the patient being unable to produce CA19-9, which is seen in 10–15% of the general population,[2] and hence cannot be used for diagnostic reassurance or follow-up purposes.

These cases are not uncommon when working in gastroenterological practice. In our practice, given this scenario, we would perform an EUS with biopsy of the bile duct stricture and adjacent lymph nodes. If this were negative, we would consider performing an elective hepaticojejunostomy, but at the time of surgery, before commencing the biliary bypass, we would – at the biliary dochotomy site – place a spyglass down to the stricture, biopsy it and await the results of the intraoperative pathology. If benign, we would proceed with the bypass; if malignant we would proceed to a pancreaticoduodenectomy. If EUS is not available, we would place a percutaneous transhepatic biliary drain (PTBD) and follow this with a spyglass examination and biopsy via the PTBD.

A review of this topic is Biliary Strictures: diagnostic considerations and approach. Singh, Gelrud and Agarwal.

Take home message

- Endoscopic therapy is a safe and reliable first-line management option for most extra-hepatic biliary strictures.
- Endoscopists must always keep the possibility of a cholangiocarcinoma in the back of their minds, especially if there are no other risk factors for biliary strictures.
- Beware of negative investigations, always correlate these with their efficacy and the patient's pathology.

References

1. Kobayashi M, Ryozawa S, Araki R, et al. Investigation of factors affecting the sensitivity of bile duct brush cytology. Intern Med. 2019;58(3):329-35. https://doi.org/10.2169/internalmedicine.1551-18.
2. Parra-Robert M, Santos VM, Canis SM, et al. Relationship between CA 19.9 and the Lewis Phenotype: options to improve diagnostic efficiency. Anticancer Res. 2018;38(10):5883-8. https://doi.org/10.21873/anticanres.12931.