Clinical Video

Two Birds with One Stone

Dominic Staudenmann^{1,2,3*}, John David Chetwood^{1,4*}, Avik Majumdar^{1,4}, Catriona McKenzie^{2,5,6}, Arthur John Kaffes^{1,2}, Payal Saxena^{1,2}¹AW Morrow Gastroenterology and Liver Centre, Royal Prince Alfred Hospital, Sydney, Australia²Praxis Intesto, Bern, Switzerland³Université de Fribourg, Fribourg, Switzerland⁴Sydney Medical School, University of Sydney, Sydney, Australia⁵Department of Tissue Pathology and Diagnostic Oncology, Royal Prince Alfred Hospital, Sydney, Australia⁶New South Wales Health Pathology, Australia

*These authors contributed equally to the work

***Correspondence to:** Payal Saxena, AW Morrow Gastroenterology and Liver Centre, Royal Prince Alfred Hospital, 50 Missenden Rd, 2050 Sydney, Australia; Tel: +61295162033; E-mail: psaxena1@jhmi.edu

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CLINICAL VIDEO

Despite improved serological and imaging diagnostic methods, liver biopsy remains an essential tool in diagnosing, evaluating and managing liver diseases. Endoscopic ultrasound-guided liver biopsy (EUS-LB) has been demonstrated to be a safe, feasible and effective technique with at least comparable or even better samples than transjugular or percutaneous liver biopsies.¹⁻³ EUS-LB has various advantages: better patient comfort, if needed portal vein pressure measurements can be conducted simultaneously and different regions in the liver can be easily sampled. Moreover, as demonstrated in this case, EUS-LB can be performed concomitantly with an upper, lower endoscopy or EUS.

A 58-year-old woman was referred from a rheumatologist with abnormal liver biochemistry on the background of obesity (body mass index 46 kg/m²) and previous methotrexate use for psoriatic arthritis. Blood work demonstrated albumin 33 g/L (34–48), protein 67 g/L (65–85), total bilirubin 4 µmol/L (2–24), GGT 69 U/L (<60), ALP 71 U/L (30–110), ALT 74 U/L (<55), AST 54 U/L (<45), respectively. Serological screenings for chronic liver diseases were unremarkable. Abdominal ultrasound was technically difficult but revealed hepatic steatosis without cirrhosis. Reliable liver stiffness measurement with vibration controlled transient elastography was not possible due to body habitus. In order to determine fibrosis stage and whether methotrexate could be recommenced in the setting of suspected non-alcoholic fatty liver disease, an EUS-LB was performed (Video 1) at the same session as a previously scheduled colonoscopy for polyp surveillance. The gastric mucosa appeared slightly reddened, swollen and inflamed, so gastric biopsies were taken. EUS-LB was performed using the “fanning technique” and doppler imaging was used to avoid blood vessels and bile ducts. No complications occurred. Histology diagnosed both steatohepatitis with significant (F2) fibrosis (Figure 1) and *Helicobacter pylori* gastritis (Figure 2a/b) obtained during the same procedure. So, two birds with one stone (Figure 3).

Video 1

Figure 1: BSAB stain demonstrating zone 3 pericellular fibrosis (200 x magnification).

Figure 2a: Haematoxylin and eosin (400x magnification) showing heavily inflamed gastric mucosa.

Figure 2b: Immunohistochemistry for *Helicobacter pylori* demonstrating presence of organisms (400x magnification).

CONFLICTS OF INTEREST

None.

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