

A novel technique for per-oral direct cholangioscopy

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Direct cholangioscopy has been possible since the 1970's (1) but reliable intubation of the common bile duct (CBD) and second order ducts has limited the applicability of the technique. One of the limitations to accessing the ducts is the acute angulation between the duodenum and the CBD (2). Various methods have been employed to access the ducts including mother-and-baby endoscopes and balloon assisted intubation (3). Mother-and-baby systems are expensive, require additional equipment and provide poorer quality images than standard endoscopes. Balloon assisted intubation carries risk of damage to the CBD, requires specialist equipment with associated learning curve (4).

A novel technique we have developed involves the use of a standard stiff wire (SMGW, Marflow AG, Switzerland) bent to the angulation of the duodenal/CBD junction and passed through the working channel of a standard 5.6mm Olympus nasendoscope. The technique begins after ERCP and sphincterotomy with a nasendoscope passed into the duodenum per oral with the tip directed at the Sphincter of Oddi. A pre-bent stiff wire is passed through the working channel

until the bend in the wire sits within the flexible portion of the endoscope. The nasendoscope is then railroaded over the pre-bent wire into the CBD by advancing the nasendoscope whilst holding the wire fixed. Once the flexible portion of the nasendoscope is completely within the CBD the wire can be removed to allow full use of the working channel.

Using this technique we have successfully intubated second order ducts and have been able to make reliable in-vivo diagnosis using high definition endoscopes, remove difficult stones and biopsy lesions under direct vision without complications. The advantages of our technique are small costs, no additional equipment is required and a short learning curve. More research is needed into the technique to determine the limits of the techniques and the risks associated.

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