

Direct peroral cholangioscopy; Is it ready?

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Peroral cholangioscopy (POC) permits direct visualization of the biliary tree for diagnostic procedures and provides endoscopic guidance for therapeutic interventions. POC is traditionally conducted using a mother-baby scope system with several limitations. A small-caliber baby scope is easily broken, expensive, and difficult to handle with limited irrigation and suction, and having small (1.2 mm) working channel. The mother-baby scope system is also operated by two skilled endoscopists using two endoscopic systems. Therefore, routine clinical application of this system has been restricted. The recent introduced single-operator POC system is the SpyGlass Direct Visualization System. The instrumentation part of the disposable 10-F catheter is attached close to the working channel of a conventional therapeutic duodenoscope. This system provides channels for separate irrigation and insertion of an optical probe as well as attachments for biopsy forceps or other accessories. An ultrathin upper endoscope could be advanced into the bile duct through the major papilla. Direct POC using an ultrathin endoscope has been proposed as a single-operator system for direct endoscopic examination of the biliary tree. Advantages of direct POC using an ultrathin endoscope include its use of conventional endoscopy equipment, its superior images of the biliary tree with large working channel, and its operation by a single endoscopist. The major obstacle for direct POC using an ultrathin endoscope is the relatively acute angle that must be maneuvered from the second part of the duodenal lumen into the biliary system. Therefore, specialized accessories or techniques are necessary to advance ultrathin endoscopes into the proximal biliary system and to improve the success rate of direct POC. Direct intraductal visualization with image-enhanced cholangioscopy and target biopsy can provide decisive clues for differential diagnosis of biliary strictures. In addition, intraductal tumor ablation with photodynamic therapy or argon plasma coagulation under direct POC are feasible and useful procedures for patients with biliary obstructive, or flat lesions with that are not amenable to conventional endoscopy. The continuous development of specialized endoscopes and accessories is expected to facilitate diagnostic and therapeutic role of POC.