Therapeutic endoscopic retrograde cholangiopancreatography

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It is essential to ensure that patients have appropriate assess - ment prior to therapeutic ERCP , which is associated with a significant morbidity and occasional mortality . All patients require routine blood screening including a clotting screen. Both cardiac and oxygen saturation monitoring are required during the pr ocedure because of the high level of sedation that is often required. The most common indication for therapeutic ERCP is relief of biliary obstruction due to gallstone disease or benign or malignant biliary strictures. The preprocedural diagnosis can be confirmed by contrast injection, which will clearly di ff erentiate the filling defects associated with gallstones and the luminal narrowing of a stricture. If there is likely to be a delay in relieving an obstructed system, percutaneous drainage may be required. The cornerstone of gallstone retrieval is an adequate biliary sphincterotomy , which is normally performed over a well-positioned guidewire using a sphincterotome connected to an electrosurgical unit. Most g allstones <1 /uni00A0 cm in diame ter will pass spontaneously in the days and weeks following a sphincterotomy , but most endoscopists prefer to ensure duct clearance at the initial procedure to reduce the risk of impaction, cholangitis or pancreatitis. This can be achieved by trawling the duct using a balloon catheter or by extraction using a wire basket. If standard techniques fail, large or awk - wardly placed stones can be crushed using mechanical litho - tripsy . If adequate stone extraction cannot be achieved at the initial ERCP it is imperative to ensure biliary drainage with the placement of a removable plastic stent while alternative options are considered. T hese include surgery , endoscopically directed shockwaves under direct choledochoscopic vision and extracorporeal shockwave lithotripsy with subsequent ERCP - to remove stone fragments.

Endoscope balloon deflated 4 Figure 9.12 The technique of double-balloon enteroscopy is per

formed with an adapted enteroscope Overtube advanced along and overtube, both of which have endoscope. Overtube balloon in /f_l atable balloons at their tip. inflated (a) Figure 9.13 During endoscopic retrograde cholangiopancreatography a side-viewing duo

denoscope is positioned opposite the papilla, which can then be cannulated using either a catheter or a guidewire (a) . Contrast is injected to achieve a cholangiogram (b) . Endoscope advanced Endoscope balloon inflated. deeper into intestine Overtube balloon deflated 6 5 Endoscope–overtube pulled Endoscope balloon deflated. back to straighten path Endoscope advanced again through intestine (b)

similar to those used in angioplasty inserted over a guidewire under fluoroscopic control. It is traditional to insert a tempo rary plastic stent to maintain drainage as several attempts at dilatation may be required. Self-expanding metal stents are most commonly used for the palliation of malignant biliary obstruction and are also normally inserted after a modest sphincterotomy . Corr ect stent placement can normally be con firmed by a flow of bile after release and by the presence of air in the biliary tree on follow-up plain abdominal radiographs. Stent malfunction, associated with recurrent or persistent bio chemical cholestasis, may be due to poor initial stent position, stent migra tion, blockage with blood clot or debris or tumour ingrowth. A repeat procedure is required to assess the cause, which can usually be r emedied by the insertion of a second stent through the original one. In addition to the standard techniques discussed above, ERCP is also used for pancreatic disease and the assessment of biliary dysmotility (sphincter of Oddi dysfunction) using manometr y in specialist centres. Indications include pancre atic stone extraction, the dilatation of pancreatic duct stric tures and the transgastric drainage of pancreatic pseudocysts. To minimise the risks of subsequent pancreatitis, pancreatic sphincterotomy is most

safely performed after the placement of a temporary pancreatic stent to prev ent stasis within the pancreatic duct. Visualisation and sampling of biliary lesions is becom ing easier and more e ff ective with the development of newer through-the-duodenoscope cholangioscopes that allow direct visualisation and instrumentation of the biliary and pancrea ducts.

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