

EPLBD versus EST plus mechanical lithotripsy

Dong Ki Lee

Professor, Department of Internal Medicine, Gangnam Severance Hospital, Yonsei University, Seoul, Korea

Endoscopic mechanical lithotripsy (EML) can be used when stone removal is impossible with a full endoscopic sphincterotomy (EST) due to larger size of the stone compared with that of the incised papillary orifice. Although the success rate of EML is high, it has several disadvantages such as longer procedure time, possible injury to the EST site or bile duct due to the use of accessories, and the effect of the stone-capturing basket. A full incision of the papillary sphincter causes complications such as bleeding, perforation, and pancreatitis in 5% to 10% of cases. By contrast, EPLBD require only a small EST or none at all, rather than a full incision. The main purpose of EPLBD is to avoid or reduce the use of EML for removal of large and difficult CBD stones; it minimize the complications associated with EML shortens the procedure time, and consequently reduces radiation exposure. Additional aim of EPLBD is to reduce the complication rate by avoiding full incision EST.

Keeping within the strict indications for EPLBD is crucial to avoid serious adverse events. Patients targeted for this method are those who already have dilated CBD due to a large stone. Consequently, the tissue of the ampulla and distal CBD are ready to be dilated and further gradual stretching of the tissue will not cause stress or sudden tearing of the ampullary roof. Patients with the CBD of less than the large balloon size are not suitable of this procedure. For the same reason, patients with strictures of the distal CBD due to repeated cholangitis should be excluded considering the high possibility of perforation. Unlike obvious strictures, however, occult or invisible strictures can be detected only during balloon inflation. Therefore, balloon should be dilated slowly and gradually.

EPLBD is already accepted worldwide. Nevertheless, EPLBD is not free from fatal adverse event such as perforation. However, if we keep within the strict indications and use proper techniques, EPLBD is safe and effective for removal of large, difficult CBD stones and can be an alternative to conventional full EST plus EML.