

# Large Choledocholithiasis Extracted by Endoscopic Retrograde Cholangiopancreatography after Large-Balloon Sphincteroplasty

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To facilitate endoscopic extraction of bile duct stones larger than a naïve papillary orifice, endoscopic sphincterotomy is used widely [1]. Conversely, since the description of endoscopic papillary balloon dilation (papilloplasty) by Staritz et al. in 1983 [2], papilloplasty has been vigorously performed due to the lower risk of bleeding and preservation of oddi sphincter function. It is difficult to retrieve large common bile duct stones using conventional methods such as sphincterotomy. Recently, several studies reported the use of large-balloon sphincteroplasty for removal of large bile duct stones [3-5].

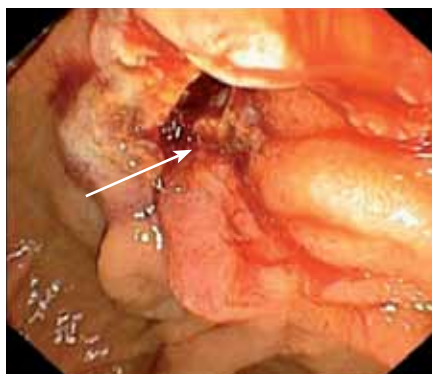
A 52 year old man presented to our emergency department with right upper quadrant abdominal pain and obstructive jaundice. Abdominal ultrasonography revealed dilation of the common bile duct and choledocholithiasis. Therapeutic endoscopic retrograde cholangiopancreatography was performed, revealing a dilated common bile duct and large stones [Figure A]. Since the stones were too large to be extracted by regular papillotomy, papilloplasty was performed with CRE (controlled radial expansion) balloon dilation reaching 18 mm [Figures B and C], which enabled removal of the stones [Figure D]. Three days after the procedure the patient was



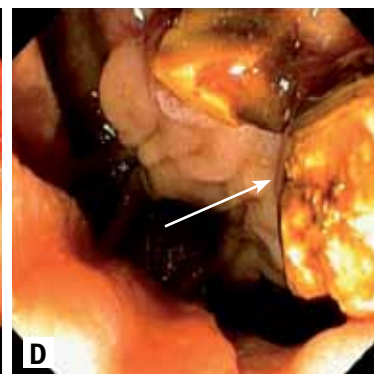
**[A]** Choledocholithiasis and dilation of the common bile duct



**[B]** CRE balloon dilation



**[C]** Large papilloplasty



**[D]** Large stones extraction

discharged from the hospital, asymptomatic and with normal liver function tests.

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#### References

1. Kawai K, Akasaka Y, Murakami K, Tada M, Koli Y. Endoscopic sphincterotomy of the ampulla of Vater. *Gastrointest Endosc* 1974; 20 (4): 148-51.
2. Staritz M, Ewe K, Meyer zum Buschenfelde KH. Endoscopic papillary dilation (EPD) for the treat-

ment of common bile duct stones and papillary stenosis. *Endoscopy* 1983; 15 (Suppl 1): 197-8.

3. Ersoz G, Tekesin O, Ozutemiz AO, Gunsar F. Biliary sphincterotomy plus dilation with a large balloon for bile duct stones that are difficult to extract. *Gastrointest Endosc* 2003; 57 (2): 156-9.
4. Heo JH, Kang DH, Jung HJ, et al. Endoscopic sphincterotomy plus large-balloon dilation versus endoscopic sphincterotomy for removal of bile-duct stones. *Gastrointest Endosc* 2007; 66 (4): 720-6, quiz 768, 771.
5. Attasaranya S, Cheon YK, Vittal H, et al. Large-diameter biliary orifice balloon dilation to aid in endoscopic bile duct stone removal: a multicenter series. *Gastrointest Endosc* 2008; 67 (7): 1046-52.