Removable covered self-expanding metal stent for extraction of a large biliary stone in a patient on dual antiplatelet therapy

A 76-year-old man, who had previously undergone coronary artery bypass grafting but had episodes of myocardial infarction despite dual antiplatelet therapy, was diagnosed with a large common bile duct (CBD) stone that was causing recurrent cholangitis. Based on general agreement among the cardiologists and hematologists, his antiplatelet agents were neither stopped nor replaced with bridging medication. He underwent endoscopic retrograde cholangiopancreatography (ERCP) without biliary sphincterotomy 7 days prior to referral to our unit. His cholangitis was temporarily treated with a straight plastic stent passing alongside the stone; however, within 3 days of the procedure, the stent had migrated distally.

The patient underwent a second ERCP with stent removal at our center. Given the constraints on performing a sphincterotomy, a 10×60-mm fully covered self-expanding metal stent (SEMS) with anchoring flaps (Hanarostent, M.I. Tech Co., Seoul; South Korea) was deployed across the papilla. An attempt to mobilize the stone with a Dormia basket failed, so the papilla. An attempt to mobilize the stone with a Dormia basket failed, so the papilla was temporarily treated with a straight plastic stent passing alongside the stone; however, within 3 days of the procedure, the stent had migrated distally.

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SEMSs have been increasingly used to treat benign biliary strictures and bile leaks [4]. Recently, the use of SEMSs has been extended to complex biliary stones as a bridge to repeated attempts at extraction. Cerefice et al. [2], in a series of 36 patients, reported a clinical success rate of 83%, with an 11.1% stent migration rate.

In this case, the SEMS allowed for gentle extraction of the stone, with only minor trauma to the papilla owing to invagination of the stent. Moreover, the anchoring flaps of the metal stent prevented it migrating distally as the stone was pulled into it with the Fogarty balloon.

In patients receiving dual antiplatelet therapy that cannot be discontinued, the use of SEMSs for stones extraction may be an expensive but safe alternative.

Endoscopy_UCTN_Code_TTT_1AR_2AC

Competing interests: None

Enzo Masci, Alessandra Bizzotto, Monica Arena, Benedetto Mangiavillano
Gastrointestinal Endoscopy Unit, Azienda Ospedaliera San Paolo – University Hospital, Milan, Italy

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DOI http://dx.doi.org/ 10.1055/s-0034-1377359
Endoscopy 2014; 46: E342
© Georg Thieme Verlag KG Stuttgart · New York
ISSN 0013-726X

Corresponding author
Enzo Masci, MD
Gastrointestinal Endoscopy Unit
Azienda Ospedaliera San Paolo – University Hospital
University of Milan
Via A. di Rudini 8
20142 Milano
Italy
Fax: +39-02-81844647
enzo.masci@ao-sanpaolo.it

Masci Enzo et al. Removable CSEMS for large biliary stone... Endoscopy 2014; 46: E342