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EDITORIAL

New fully covered self-expandable metallic stents for anastomotic biliary strictures after liver transplantation



Anastomotic biliary strictures (ABS) are one of the most commonly reported adverse events after liver transplantation [1–4]. The estimated incidence ranges between 5% and 25%, more frequent after living donor liver transplantation (LDLT). ABS play an important role in graft and patient survival. Endoscopic stent placement has become the first-line therapy in the management of biliary complications after both deceased donor liver transplantation (DDLT) and LDLT using duct-to-duct reconstruction, allowing high resolution rates to be achieved. Endoscopic therapy is technically more challenging in LDLT than in DDLT because of the complexity of the biliary anastomosis, in addition to the tortuous and angulated biliary system. Plastic stents for a calibration duration of one year have been largely used for the treatment of ABS. More recently, partially covered self-expandable metallic stents, and subsequently fully covered self-expandable metallic stents (FCSEMSs), have become available. These metallic stents have a greater diameter than the plastic stents, which potentially allows the resolution of ABS in 6 months with lower risk of stent occlusion.

In their report (Intraductal Deployment of Two Fully Covered Metallic Stents for Anastomotic Strictures following Living Donor Liver Transplantation) in the current issue of *Clin Res Hepatol Gastroenterol* [5], the King's College Hospital team describes a case where two modified FCSEMSs were inserted in the same patient for two simultaneously anastomotic biliary strictures occurring after LDLT with a modified right lobe graft bearing a complex anatomical variation. There was a portal vein trifurcation in the donor's liver resulting in two separate portal veins for the right anterior and right posterior sectors. This was reconstructed using the recipient's portal vein and its bifurcation. There were two separate donor liver bile ducts; one was anastomosed to the recipient's right hepatic duct and the other to the recipient's cystic duct.

The authors emphasize the interest of the new stent type as being superior to other types of FCSEMS. There is a potential advantage in the short length which allows a better equilibrium between the portions of the stent placed above and below the stricture, which can help stabilize the stent and prevent migration better than longer, transpapillary stents with a long distal segment. However, the intraductal position of the stent makes that stent removal relies only on the removal wire resilience, so extraction can be difficult if the wire gets broken. Other stent types equipped with anti-migration flaps have proven to be very effective in avoiding migration and achieving high and sustained resolution rates [6–9]. The other originalities of this case report lie in [1] the twin parallel FCSEMS stenting over two separate ductal strictures, and [2] the choice of 8 mm stents rather than standard 10 mm, which appears wise with regard to the slim hepatic ducts. The benefit seemed to be equivalent for both ducts whereas one could have expected a better result for the right recipient's duct than for the cystic recipient's duct. Finally, the authors assume FCSEMS stent duration (3 months) to be sufficient while 6 months is generally recommended, and this should be confirmed in further studies.

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Prat Frédéric^a

Perdigao Fabiano^{b,*}

^a AP–HP, hôpital Cochin, gastroenterology and endoscopy department, and Paris-Descartes Université, Paris 05, France

^b AP–HP, hôpital Pitié-Salpêtrière, department of hepatobiliary surgery and liver transplantation, and Sorbonne Universités, UPMC Université Paris 06, France

* Corresponding author.

E-mail address: fabiano.perdigao@aphp.fr
(P. Fabiano)

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