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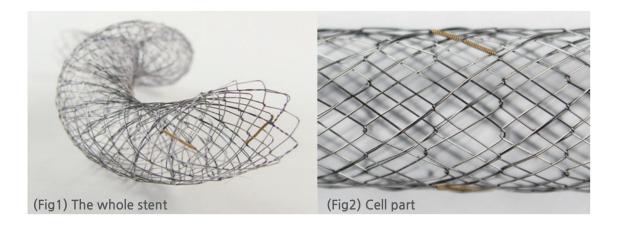
Evaluation of EGIS Biliary Stent

Double Bare Type and Double Covered Type

for the Treatment of Middle and Lower Part Malignant Bile Duct Stenosis

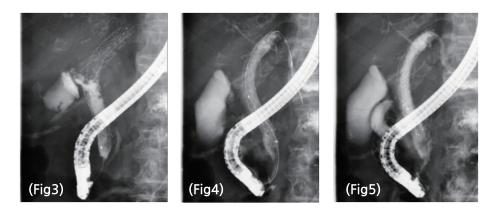


Drainage for Non-resectable Hepatic Malignant Bile Duct Stenosis is currently common in trans papillary drainage. Meanwhile, there are two methods of placement of the bile duct stenting according to the self-expandable metallic tent (SEMS): "Side-By-Side (SBS)" and "Partial Stent-In- Bilateral drainage "," SBS or PSIS ", and there is no agreed agreement on what kind of stenting ("Side-By-Side (SBS)" and "Partial Stent-In- Bilateral drainage ", "SBS or PSIS") is best for malignant hilar obstruction, and case for stenting is becoming important. The EGIS double bare stent sold by Sumitomo Bakelite has a twisted structure (Fig. 1), achieving very small cell spacing to reduce the risk of tumor ingrowth. (Fig. 2). We report a case of malignant hilar obstruction from our experience with good drainage using EGIS double bare stent.





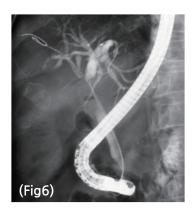
80 years old female. Case of Hepatic Malignant Bile Duct Stenosis according to colon cancer of right lobe transference. In ERC, it was judged to be a stenosis in the hepatic part and an extension of the left lobe. Since the right hepatic duct was not visualized at all, a $10 \text{mm} \times 10 \text{cm}$ SEMS of the laser cut bare type was placed across the common bile duct in the left hepatic duct. Obstructive jaundice was improved, but stent occlusion was judged to be due to tumor ingrowth for about 3 weeks after placement. (Fig. 3) Next, since the left hepatic duct was not observed at all, an EGIS double bare $10 \text{mm} \times 8 \text{cm}$ length was placed in the previously placed stent. (Fig. 4) It was confirmed that the stent expansion was good in the contrast after the stent placement. (Fig5) Until now, two months after the placement, the stent function is still in progress.



Case 02

80 years old female. Case of Non-resectable Hepatic Cholangiocarcinoma. We decided to place SEMS on both lobes, because in the ERC, the left and right bile ducts were shown as "Bismuth classification Type II or higher". First, the guidewire (GW) was placed as a marker of the bile duct branch in the right hepatic duct and then GW was also placed at the left hepatic duct. (Fig. 6) In the left hepatic duct, an EGIS double bare stent of 10mm×6cm was placed across the common bile duct. Next, we made the right posterior segmental branch to seek over the

mesh to place the GW and the mesh section was extended to a Papilla expanding balloon and the right posterior segmental branch EGIS Double bare stent 10mm×6cm length was placed in PSIS form. (Fig. 7). After the stent placement, it was confirmed that the stent expansion was good in contrast. (Fig. 8) We had some difficulty in seeking the right posterior with the GW, but the device easily passed through the mesh. The stent function has passed without any problem until 3 months after installation of the stent.









80 years old male. Case of Hepatic Malignant Bile Duct Stenosis according to transference of gastric cancer lymph gland. In ERC, the left and right bile ducts are not "Bismuth classification Type II or higher". It has been considered as there is a stenosis at upper bile duct, I deploy the SEMS's 10mmx10cm Laser cut bare type stent from Left hepatic duct to Right posterior segmental branch through Common bile duct.

However, stent occlusion due to tumor ingrowth was judged 3 months after placement, and the patient was suspected to have "Bismuth classification Type II or more" of left and right bile duct due to tumor invasion. (Fig9). This time, we decided to do bilateral drainage. Like Case 1, the GW was left in the right posterior segmental branch as a marker, and a 10mm ×8cm length of EGIS double bare stent was placed in the stent at the position placed before. Then, we made the right posterior segmental branch seeking over the mesh and the GW was installed. After, the mesh part was extended with a Papilla expansion balloon, and a 10mm ×8cm length of EGIS Double bare stent was placed in the form of a PSIS. (Fig10) After stent placement, stent expansion of the right posterior segmental branch on contrast was slightly poor, so we extended one more time with a Papilla expansion balloon (Fig 11). At last, it was confirmed that the contrast media flow was good. (Fig. 12) Like Case 1, it was difficult to seek the right posterior segmental branch with GW, but the device easily passed through the mesh portion. Two months after placement, the stent function is in progress until now.









Considerations

The EGIS Double bare stent has a diameter of 8mm and 10mm, and can be selected from 4cm to 12cm in length, and 1cm apart in 10cm length. There is a small step difference from the GW of the delivery tip, and since the shaft has moderate stiffness, it is possible that the mesh could have been passed easily. Also, EGIS Double bare stent, as shown in the above, is expected to contribute to reduce migration risk because of its excellent conformability, and the tumor ingrowth will be little as the cell spacing becomes narrower. From experience, it is easy to seek by using GW with hydrophilic coating such as Large focus (Terumo Co.) when the mesh part of EGIS double bare stent is difficult to pass through GW. In addition, it is thought that it is necessary to be familiar with the deployment of the stent since the deploy force is stronger than other stents at the beginning of the stent deployment. If the second placed stent does not expand well at the part of the mesh that passes through the mesh, expand it once more with a Papilla expander balloon. It is also important to note in deployment that a stent of about 5 mm in front of the marker at both ends of the stent is a single bare stent. We cannot evaluate the re-intervention after EGIS double bare stent "PSIS" installation because there is no current experience. In addition, although the progress is good to the present, it is necessary to further carry out the case in the future whether the dense cell of the stent contributes to the long patency of the stent.

Conclusion

To date, all three cases using Double bare stent have been getting good drainage effect. If we can confirm the evaluation of long patency and re-intervention, it may be a useful stent for non-resected malignant biliary strictures



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