Metallic or Two Plastic Stents for Bile Duct Obstruction in Ampullary Cancer?

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Background and Aims: Although ampullary cancer is a relatively uncommon malignancy, it is frequently associated with biliary obstruction. Endoscopic biliary drainage is regarded as a palliative treatment of choice for patients with inoperable ampullary cancer. However, there are no data concerning choice of stent in this patient population. The objective of this study was to compare the efficacy of metallic and plastic stents for biliary obstruction in patients with ampullary cancer.

Methods: Thirty-seven patients (15 men and 22 women; median age 74.7 years) with ampullary cancer treated with endoscopic biliary drainage were enrolled. Metallic and two plastic stents were placed in 17 and 20 patients, respectively. Clinical success, stent patency, and stent malfunction were evaluated.

Results: Clinical success was achieved in all patients (100%). The median period of stent patency was 132.7 days in the metallic stent group and 128.5 days in the plastic stent group (p>0.05). Stent malfunctions developed in 17 and 19 patients in the metallic and plastic stent groups, respectively. Stent occlusion occurred in 15 (88.2%) and 15 (75%) patients and stent migration occurred in two (11.8%) and four (20%) patients in the metallic and plastic stent groups, respectively.

Conclusions: Endoscopic biliary drainage using metallic or plastic stents is effective for initial endoscopic palliation in patients with obstructive jaundice because of ampullary cancer. Although metallic and plastic stents had similar clinical effect, it seems reasonable to choose two plastic stents as the first option in patients with ampullary cancer considering the cost-effectiveness.

Key Words: Ampullary cancer; Stent; Biliary obstruction