Efficacy of Y-Shaped Bilateral Self-Expandable Metallic Stent Placement in Patients with Unresectable Hilar Cholangiocarcinoma


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Introduction: Bilateral biliary stenting is the palliative treatment for biliary drainage in patients with hilar cholangiocarcinoma. However, there are few studies on the outcomes of Y-shaped bilateral self-expandable metallic stent placement. The aim of our study is to evaluate the clinical efficacies of endoscopic bilateral metal stenting using Y-stent for the management of malignant hilar obstruction.

Methods: We performed a retrospective review of prospectively collected data for Y-shaped biliary stent placement, from January 2010 to December 2014, in two tertiary medical centers. The outcomes were assessed by the overall survival, complication, and recurrence of jaundice.

Results: A total of 23 Y-stent placement procedures were performed in patients with hilar cholangiocarcinoma. The mean age was 77.4 ± 7.2 years and 56.5% (13/23) were male patients. The tumor according to Bismuth classification was type II in 8 patients (34.8%), type IIIa in 5 (21.7%), type IIIb in 1 (4.3%), and type IV in 9 (39.1%). Technical success was achieved in 91.3% (21/23) and reduction of serum bilirubin showed in 94.7% (18/19) after Y-stent placement. After the procedure, 9 of the 23 patients (39.1%) had died during the follow-up, and mean survival time was 18.6 ± 4.5 (9.8-27.4) months (Fig.1). There was no procedure-related mortality. The recurrence of jaundice was occurred in 8 patients (34.8%) and the mean time of occurrence of stent clogging was 8.1 ± 5.7 months.

Conclusion: Y-shaped bilateral metal stent placement is a safe and effective procedure for unresectable hilar cholangiocarcinoma. Larger prospective series and randomized controlled trials would be required to assess the long-term effect.

Figure: P-127