

Editorial

Self-Expanding Metallic Stents in Malignant Biliary Obstruction: Do Indian Patients Behave Differently?

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Endoscopic biliary drainage is the procedure of choice for patients with unresectable extrahepatic biliary obstruction (EHBO) due to malignancy. The use of self-expanding metallic stents (SEMS) provides better patency and require less reintervention as compared to plastic stents and has become a standard of care in patients with a life expectancy >4 months. Endoscopic biliary drainage is effective in majority (>80%) of patients. A plastic stent can be used if the patient's life expectancy is <4 months.^[1,2] In a meta-analysis of 20 randomized controlled studies (1713 patients) comparing plastic versus metal stents, the authors showed better patency, less reintervention, higher symptom-free survival at 6 months, less late complications or cholangitis, or block of stent due to sludge in SEMS arm; however, there was no differences in overall patient survival.^[3] Several things need to keep in consideration during stent placement across hilar strictures. SEMS placement of hilar lesions carries the risk of cholangitis and use of air cholangiogram is better.^[4] The stent placement of hilar lesions aim to drain >50% of the liver volume, and it is important to drain unintentionally opacified ducts.^[1,2]

There is not much data from India. In a study from Jaipur by Gupta *et al.*^[5] in this issue of JDE, the authors have published their experience of a prospective, uncontrolled, the study using uncovered SEMS placement for malignant EHBO.^[6] The study included a total of 101 patients. The etiologies of EHBO included gallbladder cancer ($n = 47$), cholangiocarcinoma ($n = 25$), pancreatic cancer ($n = 22$), and ampullary carcinoma ($n = 7$). Technical failure due to inability to pass the guidewire across the stricture was seen in seven patients including six hilar cases which were managed by percutaneous biliary drainage. Clinical success (defined as a decline of serum bilirubin at day 7 by at least 50%) was seen in 82.2% of patients

with no significant difference between hilar and distal biliary strictures. The median stent patency was 109 days which was better for distal strictures than hilar strictures (135 days vs. 95 days, respectively). The stent patency is lower in the current study than reported by most of the studies.^[3,6] About 54.5% had a patent stent at the end of 6 months. The stent dysfunction was defined as clinical evidence of stent dysfunction or death. As all patients at death may not have stent dysfunction, the rate of stent dysfunction may be actually different than is reported. Thirty-three patients required biliary reinterventions for stent dysfunction which was more for hilar than lower end strictures (41.1% vs. 6%). The stent patency was higher in the patients receiving chemotherapy ($n = 43$) as compared to those who did not receive chemotherapy. The median survival of patients was 129 days, which was not significant for hilar or lower end strictures. Only 43 patients were alive at 6 months. Survival was significantly better in those with clinical success after SEMS placement. Only 19 patients had Bismuth-Corlette hilar type 2 ($n = 19$) strictures, thus limiting the impact of type 2 strictures on outcomes.

The study differs from available literature in several important aspects. Overall survival and stent patency are lower than reported by most of the studies.^[3] These findings may represent late diagnosis (at an advanced stage) due to late referral of patients to tertiary care centers. The lower survival and stent patency rates may also be secondary to the inclusion of a significant number of gallbladder carcinoma patients which is associated with poor survival. The authors found that stent patency was more in the distal location of stricture, which may also be related to poor survival

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in gallbladder carcinoma patients. All cholangitis happened in hilar strictures group, which highlights that the management of these strictures should be done by experts endoscopists and centers where percutaneous biliary drainage facility is available in case of failed endoscopic management or cholangitis. The effect of chemotherapy on stent patency is not shown by other studies and requires analysis in a large sample size. The study raises several queries. Do patients in India with malignant EHBO have a worse prognosis than reported in literature? What are the causes for worse prognosis? Is worse prognosis related to advanced stage of disease at presentation or to inadequate drainage/complications? If it is true, then we should try to identify a subgroup of patients where plastic stents can be placed in the place of costly SEMS (worse prognosis at presentation) or where bilateral stenting should be done. The study encourages further studies from India; probably, a multicenter prospective study should be conducted to answer all these questions.

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