Lumen Apposing Metal Stents versus Double Pigtail Plastic Stents for Early (<4 weeks of illness) Endoscopic Transluminal Drainage of Pancreatic Necrotic Collections

Surinder Singh Rana, MD, D.M (1), Sarakshi Mahajan, MD (2), Ravi Sharma PhD (1), Gaurav Sharma, PhD(1), Sachin Hosahally Jayanna, MD, DM (1), Mandeep Kang, MD (1), Rajesh Gupta, MS, MCh (1)

1. Post Graduate Institute of Medical Education and Research, Chandigarh, India
2. Washington University at Saint Louis, Saint Louis, MO, USA

Introduction

- The pancreatic necrotic collections (PNC) gradually liquify with time, and collections in the early phase of illness (<4 weeks after the onset of attack of pancreatitis) have more solid content as compared to collections in the delayed phase (<4 weeks of illness).
- There is no data on the comparative efficacy of lumen-apposing metal stents (LAMS) and plastic stents (PS) for endoscopic transluminal drainage (ETD) done during the early phase of acute pancreatitis (AP).

Objective

To retrospectively compare the safety and efficacy of ETD of PNC in the early phase (< 4 weeks of illness) using PS with LAMS.

Methods

- The endoscopic database of our unit was retrospectively searched for all patients who had undergone EUS-guided drainage/debridement of PNC between January 2018 and November 2024 to identify patients who had undergone early (<4 weeks of the onset of acute pancreatitis) ETD with either PS or LAMS.
- The two groups were compared for the baseline demographic features, clinical characteristics, indications of interventions, number and types of interventions performed, need for ETN, post-procedure complications, need for surgery, and final outcome.

Results

Demographics: Forty- five patients (39 M; age range: 19 to 58 yrs) underwent ETD using LAMS whereas 21 patients (18 males; age range:21-60 yrs) underwent ETD using PS.

Results

- The size of the PNC as well as the amount of solid necrotic content was comparable between the two groups.
- The procedure was technically successful in all patients in both the groups whereas clinical success was significantly higher in the LAMS group (88% versus 48%; p< 0.001).
- Direct endoscopic necrosectomy was performed more frequently in the PS group (86% vs 64%; p<0.05) as were the number of procedures (mean number of procedures: 8 versus 3).
- There was increased mortality (19% vs 6%), need for rescue surgical necrosectomy (52% vs 11%), and complications (42% vs 20%,) in the PS group as compared to the LAMS group

Conclusions

LAMS seem to have excellent efficacy and safety compared to PS in the management of PNCs in the early phase of illness (<4 weeks after the onset of acute pancreatitis).