LUMEN APPOSING METAL STENTS VERSUS PLASTIC STENTS IN THE MANAGEMENT OF PANCREATIC PSEUDOCYST: A COST-EFFECTIVENESS ANALYSIS

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Background: EUS-guided drainage is an effective and accepted primary modality for the management of PP. A lumen apposing metal stent (LAMS) has recently been developed specifically for drainage of pancreatic fluid collections, which may be superior to using traditional plastic stents (PS).

Aims: Comparing the cost-effectiveness of LAMS to PS.

Methods: A decision tree is developed assessing both endoscopic drainage strategies for patients with PP: LAMS and PS over a 6 months time horizon. For each strategy, in-patients received a stent and are followed for subsequent need for direct further interventions or adverse events leading to unplanned endoscopy, percutaneous drainage (PCD), surgery, or successful endoscopic drainage using probabilities obtained from the literature. The unit of effectiveness is successful endoscopic drainage without need for PCD or surgery. Costs in 2016 US$ are based on inpatient institutional costs. Physician fees are obtained from the American Medical Association. A third-party payer perspective is adopted and sensitivity analyses performed.

Results: The success rate is 93.9% for LAMS and 96.96% for PS. Respective costs per successful drainage are US$18,129 (LAMS) and US$10,403 (PS). Being both more costly and less effective, the LAMS strategy is thus characterized as dominated (in the economic sense) by the PS approach. Both deterministic and probabilistic sensitivity analyses confirm the robustness of these findings.

Conclusions: The use of LAMS is not more effective and more costly than PS in the management of patients with PP. As such, PS should be preferred over LAMS as initial management of these patients.

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