Feasibility and Safety of EUS-guided Cholecystoenterostomy with a Modified CSEMS

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Background/Aims: Percutaneous cholecystostomy has been widely used in patients with acute cholecystitis, who are unsuitable for cholecystectomy because of high risk for operation and general anesthesia or advanced cancer with a limited life expectancy. However, this procedure has several drawbacks such as patient discomfort associated with a catheter and catheter dislodgement as well as bile leakage, pneumoperitoneum, and bleeding. Therefore, EUS-guided cholecystoenterostomy with a modified covered self-expandable metal stent is being attempted as an alternative treatment for management of acute cholecystitis.

Methods: We enrolled thirteen patients with acute cholecystitis, who did not respond to initial medical treatment and evaluated technical success, functional success, complications associated with placement of a metal stent, and recurrence of acute cholecystitis.

Results: Technical success rate was 100% (13/13). All patients achieved functional success within 3 days after placement of a metal stent. Pneumoperitoneum occurred in two patients. But, all patients improved with conservative management. Cholecystitis did not recur in any patients during follow-up periods (median 56 days, range 21~175 days).

Conclusions: Placement of a modified CSEMS after EUS-guided cholecystoenterostomy may be a feasible and safe alternative option to percutaneous cholecystostomy in patients with acute cholecystitis, who are unsuitable candidates for cholecystectomy. And, placement of a metal stent has several advantages including prevention of bile leakage as expanding, compared to a plastic stent.