Retrospective analysis of prophylactic pancreatic stent dislodgement after 2 weeks

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Aim
To assess the rate of spontaneous passage of pancreatic duct stents placed for prophylaxis against pancreatitis after 2 weeks.

Background
Placement of a small pancreatic duct stent at ERCP to prevent pancreatitis is beneficial in high risk patients. Prolonged stenting of the pancreatic duct is associated with duct changes that can be clinically significant. More than 90% of stents placed for pancreatitis prophylaxis will spontaneously dislodge after 30 days. There are reports of pancreatic duct strictures occurring in stents placed for < 4 weeks. It is our practice to remove pancreatic stents after 2 weeks to prevent pancreatic duct injury.

Indications for Prophylactic PD Stent

Supported by expert consensus or study outcomes
- Minor orifice pancreatic sphincterotomy
- Major orifice pancreatic sphincterotomy
- Ampullectomy
- Patients with SOD undergoing sphincterotomy (biliary, pancreatic, or dual)
- Patients with suspected SOD with intact papilllas and normal manometry results

Possible Indications
- Multiple or complete pancreatic duct injection(s)
- Trauma to the papilla
- Sphincter balloon dilation
- History of post-ERCP pancreatitis
- Precut sphincterotomy

Methods
We routinely use a 5F stent for prophylaxis in high risk cases. A stent log was created to track all stents placed and follow them to dislodgement or removal.

Results
During the time period, there were 283 pancreatic stents placed. 171 (60.4%) were placed for pancreatitis prophylaxis. 85/171 (49.7%) stents were confirmed dislodged by x-ray. However, 42.7% (73/171) stents required an EGD for removal. There is no follow-up information on 13/171 (7.6%) patients despite multiple attempts to contact them. At the time of EGD, 16/73 (21.9%) stents had fallen out between the time of X-Ray and EGD. 43/73 (58.9%) required endoscopic removal. Fourteen of 73 (19.2%) had their EGD done outside of our institution. Assuming all 14 required stent extraction by EGD, a total of 57/171 (33.3%) stents placed for pancreatitis prophylaxis required EGD for removal after 2 weeks.

Conclusion
A large percentage of stents placed for pancreatitis prophylaxis remained in place after two weeks. More stents may be dislodged after 4 weeks, reducing the need for a second procedure. This needs to weight against the risk of pancreatic duct injury. The use of a smaller caliber stents (3F, 4F) or those without internal phalanges may result in more spontaneous passage within 2 weeks.