Endoscopic Hemostasis Using a Metallic Biliary Stent for Life-threatening Post-sphincterotomy Bleeding in a Jehovah’s witness.

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Background

* Endoscopic sphincterotomy (ES) is a basic technique for performing therapeutic interventions during ERCP.
* Bleeding after ES is a recognized complication and can be difficult to treat.
* We present a unique case of endoscopic hemostasis using a metallic biliary stent for life-threatening post-sphincterotomy bleeding in a Jehovah’s Witness.

Case Report

A 52 y/o female Jehovah’s Witness, who underwent open cholecystectomy 8 years ago, presented with a one week history of intermittent right upper quadrant abdominal pain associated with bilious vomiting, subjective fevers, and dark colored urine. Admission labs were remarkable for leukocytosis of 12.4, total bilirubin of 3.8, alkaline phosphatase of 250, AST of 101, and ALT of 201. Abdominal ultrasound was unremarkable. MRCP was then obtained that revealed biliary dilation with a 1.2 cm obstructing CBD stone. ERCP was performed with removal of a large bile duct stone by biliary sphincterotomy and balloon extraction. The procedure was complicated by minimal bleeding from the sphincterotomy. Hemostasis was achieved with epinephrine lavage of the sphincterotomy site. Overnight, the patient developed significant hematemesis, which led to a drop in hemoglobin from 12.0 to 6.7. The patient was transferred to the intensive care unit for resuscitation given profuse bleeding and hypotension. She refused blood products as she was a Jehovah’s Witness, and had to be resuscitated with crystalloids and factor VIIa. Since the patient continued to bleed, urgent endoscopy was performed which revealed active bleeding from the sphincterotomy site. Epinephrine injection at the site was unable to control the bleeding. A covered metal stent was placed across the papilla into the bile duct for continuous tamponade, and hemostasis was achieved. Repeat blood count a few hours later revealed a continued decline to a hemoglobin of 4.6. Given concern that the patient may need emergent surgery for control of bleeding, a repeat endoscopy was performed. The biliary stent was found to be in place and hemostasis was reconfirmed. She was treated with darbepoetin and parenteral iron for post-hemorrhagic anemia. She had no further bleeding and her blood count eventually recovered. Two months after discharge, a repeat ERCP was done and the biliary stent was removed.

Discussion

* Endoscopic sphincterotomy (ES) is an established method for accessing the biliary and pancreatic ductal systems for therapeutic intervention.
* Acute or delayed post-ES bleeding has been reported in <1% to 10% of patients. A small amount of post-ES bleeding is not uncommon intra- or post-procedure and most often resolves spontaneously. However, some cases present with significant bleeding that requires blood transfusions and urgent endoscopic intervention.
* Risk factors for post-ES bleeding may include coagulopathy or recent anti-coagulation, cholangitis, cirrhosis, periampullary diverticulum, stone impaction, ampullary tumor, and extension of previous sphincterotomy(1).
* Treatment options for post-ES bleeding include conservative-supportive measures, endoscopic hemostasis, angiographic embolization, and surgery.
* We attempted epinephrine injection unfortunately, bleeding continued, leading us to treat with metallic stent for mechanical tamponade.

Conclusion

* In conclusion, we believe that in persistent post-ES bleeding, when refractory to injection therapy or when not all modalities to induce hemostasis are available, the application of a metallic stent should be considered a further therapeutic option, allowing the endoscopist to avoid additional procedures, with higher risks of complications(2).
* However, further studies and new advanced metallic prostheses with adequate features are needed to ensure safe and efficient use.