Abstract

A 38 year old female with obstructive jaundice underwent therapeutic ERCP. Minor self limiting bleed was observed from the ampulla during the procedure. Later she had massive bleed for which endoscopic therapy was not possible due to obscured vision of the ampulla. So immediate angiographic embolisation of the bleeding vessel using the available coronary hardware was performed and bleed was controlled. Embolotherapy is an attractive and safe therapeutic option for control of massive post-sphincterotomy bleed.

Introduction

Ampullary bleeding is the most frequent complication after endoscopic sphincterotomy (ES). Mostly early bleeding is self limited, but when severe or refractory to endoscopic treatment, other therapeutic alternatives are required. We describe a case of obstructive biliopathy where coronary hardware was used for embolotherapy in massive post ES bleed.

Case Report

A 38 yr old female was admitted with history of pain in right hypochondrium and jaundice since one week. Examination revealed mild icterus and tenderness in the right hypochondrium. Laboratory investigations revealed normal hemogram and prothrombin time index, serum bilirubin- 2 mg/dl (0-2), ALT-70 IU/L (0-40), AST- 24 IU/L (0-40) and ALP- 368 IU/L (40-170). Ultrasound abdomen showed cholelithiasis with dilated common bile duct (CBD). An endoscopic retrograde cholangiopancreatography (ERCP) confirmed dilated CBD with intraductal stone. ES was done and stone was basketed out. Mild bleeding was observed during procedure which stopped spontaneously within three minutes. An hour later, patient developed three episodes of massive hematemesis. Emergency duodenoscopy disclosed massive ampullary bleed obscuring the endoscopic view, so endoscopic hemostasis was not possible. Hemodynamic instability was corrected with intravenous fluids and 3 units of packed red blood cells. She was immediately taken up for abdominal angiography via right common femoral artery. Selective catheterization of celiac artery was done with 4 French coronary catheter system, which revealed contrast extravasation from superior pancreatico-duodenal artery. This artery was successfully embolised with 350-500 micrometer polyvinyl alcohol foam particles (Cook, USA) (Figure 1 (a) and (b)). Subsequently her hematocrit and hemoglobin stabilized and she was discharged from the hospital after 5 days.

Discussion

The most frequent complication of ES is ampullary bleed but there is limited data on its optimal management. It is classified into three types (Table 1).

Mild or moderate bleeding during the procedure is usually self-limited, but if it does not stop within 3 minutes, endoscopic treatment with diluted (1:10,000) epinephrine/sclerosant injection, application of hemostatic clips, or electrocoagulation may be required. Immediate, delayed or recidivant massive hemorrhage has an incidence of < 1% to 2%, and needs alternative therapeutic approaches as endoscopic hemostasis is not possible due to obscured vision and hemodynamic instability. Surgery is required in approximately 10-20 % of such patients but is associated with high mortality. A growing amount of evidence is being reported on usefulness of angiographic approach in the management of non-variceal gastrointestinal hemorrhage.

Diagnostic angiography of ampulla of vater focuses on the anatomy of celiac and superior mesenteric arteries. Above the level of opening of CBD into ampulla, the duodenum is supplied by the superior pancreaticoduodenal artery (branch of
Transcatheter intervention to control hemorrhage takes two forms—infusion of vasoconstricting medication, or mechanical occlusion of the bleeding artery (embolotherapy). Embolotherapy can be performed with temporary agents like gelatin sponge and autologous clot, or permanent agents like steel coils. We employed this resource in our patient which led to successful embolisation of bleeding superior pancreaticoduodenal artery. Due to the lack of availability of specialized hardware, coronary hardware was used in this case.

Table 1: Classification of Post Endoscopic Sphincterotomy Bleed

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<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
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<td>Clinical (i.e. not just endoscopic) evidence of bleeding, Hemoglobin drop &lt; 3gm/dl, No need of transfusion</td>
<td>Transfusion (4 units or less), No angiographic intervention or surgery</td>
<td>Transfusion (5 units or more), Angiographic intervention or surgery needed</td>
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Thus our experience with this patient suggests that embolotherapy is a useful and safe therapeutic tool in the management of massive post ES bleeding.

References