ABSTRACT
Local re-bleeding from post-banding ulcers (PBUs) is a relatively unusual complication of emergency endoscopic variceal band ligation (EVBL) of esophageal varices. It is usually observed one to three weeks after EVBL and represents a high-mortality situation due to the limited options for bleeding control and the morbidity associated with the underlying liver disease. In this report, we describe a female patient who had a positive outcome following a “salvage” transjugular intrahepatic portosystemic shunt (TIPS), when the combined pharmacologic and endoscopic therapies failed to control her bleeding from PBU. Although this sequence of therapeutic approaches has been established as the standard approach for bleeding by esophageal varices, no consensus exists so far in applying the same strategy for uncontrolled bleeding by PBU.

KEYWORDS: Endoscopic Variceal band ligation (EVBL); Re-bleeding from post banding ulcers (PBUs); Transjugular intrahepatic portosystemic shunt (TIPS).

INTRODUCTION
Over the last two and a half decades, endoscopic variceal band ligation (EVBL) has been established as the preferred therapeutic option for controlling acute variceal bleeding. [1-10] Bleeding from post-banding ulcers (PBUs), is a relatively unusual complication that takes place 1-3 weeks after emergency EVBL, is attributed to early detachment of the rubber ligation bands and represents a situation with a mortality of approximately 50% due to the limited options for bleeding control and co-morbidities associated with the underlying liver disease. [6-10] Although, there is enough evidence to support the application of a transjugular intrahepatic Porto systemic shunt (TIPS) as salvage-therapy for patients who fail the combined pharmacologic and endoscopic treatments of bleeding esophageal varices and are poor surgical candidates, there is no consensus for the management of re-bleeding from PBU. [11-14] In this report, we describe a female cirrhotic patient whose re-bleeding due to PBU was managed successfully by the application of TIPS, after she failed to respond to first line therapies.

Presentation of the patient: A 66-years-old housewife with a history of cirrhosis (Child-Pugh’s and MELD scores resulted in 7 and 8 points respectively) due to non-alcoholic steatohepatitis, was admitted to our hospital due to gastrointestinal bleeding. She had originally been admitted two weeks earlier due to acute esophageal variceal bleeding, which had been controlled by means of an emergency endoscopic band ligation (EBL with the use of a total of three rubber bands) and remained as an inpatient for 6 days. During that original hospitalization, she received prophylactic antibiotic therapy with IV cefotaxime, while proton pump inhibitors were not prescribed on discharge. The cause of her cirrhosis was established 4 years earlier by liver biopsy. The presence of esophageal varices had been established by endoscopy 3 years ago and her therapy of a selective b-blocker (metoprolol) was based on the co-existence of coronary heart disease. She was also treated with isosorbide mononitrate 20 mg bid. Other medical problems were type II diabetes treated by insulin (glargine plus lispro), and hypertension on olmesartan 20 mg and amlodipine 5 mg.
On re-admission, she was started on IV fluids and standard doses of IV cefotaxime and somatostatin. Upper gastrointestinal endoscopy revealed three ulcers at the gastro-esophageal margin, which corresponded to the ligation sites of the original variceal banding. One of the PBUs had a recent overlying thrombus; there was a small amount of old blood in the stomach, but no evidence of active bleeding. Following a new episode of hematemesis 48 h later, a second emergency gastroscopy revealed the presence of a large quantity of recent blood and the presence of thrombi in two of the PBUs. An attempt to prevent re-bleeding was performed by infusing a total of 8cc of ethanolamine at three different sites around one of the PBUs. After withdrawing the needle from the last infusion site spurring hemorrhage was observed and endoscopy was discontinued due to ensuing hemodynamic instability and a reducing level of consciousness. Her hemoglobin fell from 7.6 gr/dL the previous day to 4.2 gr/dL. Following the administration of additional IV fluids, 3 units of blood and the insertion of a Sengstaken-Blakemore tube she regained hemodynamic stability. The following day she was transferred for 48 hours to a different Hospital, which serves as a referral center for the placement of a trans-jugular intrahepatic portosystemic shunts (TIPS). She underwent TIPS the following day. After TIPS insertion, she was admitted for observation at the local intensive care unit for 24 hours. As she remained hemodynamically stable, the balloon tamponade was removed 12 hour after TIPS placement and she was transferred back to our Unit. Since then, during a follow-up period of two years, she has had inspections of TIPS patency at 6-month intervals, no re-bleeding episodes and has remained well with the exception of two admissions for hepatic encephalopathy that responded to medical treatment.

DISCUSSION
Despite the extensive literature on early re-bleeding, defined as recurrence of hemorrhage within the first 6 weeks following the control of the original episode of variceal ligation, there are relatively limited reports where the cause of re-bleeding is clearly described. When the cause of early re-bleeding is specified, the persistence or reappearance of varices and the formation of ulcers at the site of detachment of the rubber bands appear to be the main underlying conditions.

In two of the retrospective series, where re-bleeding is attributed to post-banding ulcers (PBUs) the incidence ranges from 2.7% to 5.5%, while the time interval from emergency placement of the rubber bands and re-bleeding ranges between 11-13.5 days. It appears that bleeding from PBU is several fold more common (7.1 vs 0.5%) in patients who had EBL as an emergency procedure to control bleeding, as was the case for our patient, rather than a preventive measure. Similarly the timing of re-bleeding in our patient, which was 14 days, is close to that described in the studies mentioned above. In one of the series, 11 of the 21 patients who re-bled from post-banding ulcers died within a few days mostly from infectious complications. It appears that the majority (7/11) were among those that had not received prophylactic antibiotics during EBL. The successful outcome of this patient may in part be related to the administration of prophylactic antibiotics during EBL and the relatively good prognostic scores of her liver disease, with a Child-Pugh score and a MELD score of 7 and 8 points, respectively. In general, patients with a MELD score of less than 8 have a better prognosis after TIPS, and a low score has been associated with a lower mortality among patients re-bleeding following band ligation for variceal bleeding.

When bleeding due to post-banding ulcers was confirmed on the original endoscopy, performed on admission of our patient, the initial therapeutic approach was pharmacologic with a somatostatin infusion. Following the recurrence of bleeding 48 hours later, attributed to two of the PBUs, an attempt to apply sclerotherapy with ethanolamine in one of the ulcers resulted in an exacerbation of the bleeding and hemorrhagic shock. This life-threatening situation was successfully managed with TIPS. Although, there is ample evidence indicating the application of a trans-jugular intrahepatic porto-systemic shunt (TIPS) as salvage-therapy for patients who fail combined pharmacologic and endoscopic treatments during the acute control of bleeding esophageal varices, there is no consensus as to whether this approach is suitable for the management of re-bleeding from PBU. TIPS proved effective in this particular patient; whether this is the best approach remains to be proven by carefully designed studies.

There is no conflict of interest regarding this manuscript.

REFERENCES


