Efficacy of Combine Octreotide infusion and Endoscopic Variceal Sclerotherapy in Controlling of Acute Variceal Haemorrhage

A W CHAUDHARY H M TABASSUM M A CHAUDHARY
Department of Surgery, Sheikh Zayed Medical College, Rahim Yar Khan
Dr. Hassan Mahmood Tabassum, Assistant Professor Surgery

Objectives: To determine the efficacy of Octreotide infusion in combination with Esophageal Variceal Sclerotherapy in controlling variceal hemorrhage and preventing early rebleed. **Design**; It is prospective observational case series. **Place and Duration of Study**: The study was conducted at Sheikh Zayed Hospital/ Hamza Medicare Rahim Yar Khan between January 1997 and December 2004. **Patients and Methods:** 580 patients presenting with acute variceal hemorrhage were detected among 892 patients presented with upper gastrointestinal bleeding. They were managed with combination of Octreotide infusion 25mg/hour at presentation with other resuscitative measures. Endoscopic Variceal Sclerotherapy was performed within 24 hours. The patients were followed up for 05 days. **Results**: Bleeding stopped in 464 patients i.e. 80%, while in rest of 20% patients re bleed was observed and managed with review EVS and Octreotide 50g/hour. In 10% (58 patients) bleeding could not be controlled in spite of all efforts. **Conclusion**: Hepatitis C is the most common cause of Ch. Liver Disease. Acute variceal hemorrhage is the commonest type of upper GIT bleeding and combined Octreotide infusion and EVS treatment is effective in controlling 90% of acute variceal hemorrhage.
Key words: Esophageal Variceal Sclerotherapy, Octreotide therapy, Acute Esophageal Hemorrhage.

Esophageal varices are common complication of portal hypertension resulting from cirrhosis of liver. Variceal hemorrhage is the major cause of morbidity and mortality is cirrhosis of liver. Substantial financial burden is attributable to this illness[1]. Patients with ascites have a significantly higher variceal pressure and wall tension than patients without ascites[2].

Gastric varices account for 10-30% of all the cases of variceal bleeding. Endoscopic Sclerotherapy is unsatisfactory in most cases of gastric varices. Tissue adhesives control 90% bleed with a rebleed rate of 50%. TIPSS together with surgical shunts are thought to be first line treatment in gastric varices[3]. Each bleeding episode is associated with mortality and further threat of recurrent hemorrhage with even more mortality.

Patients and methods:
This study comprises of eight hundred and ninety two consecutive patients presenting with upper GI bleeding between January 1997 and December 2004 at Sh. Zayed Hospital/Hamza Medicare, Rahim Yar Khan. Endoscopy was performed in all patients. In five hundred and eighty patients esophageal variceal bleeding were detected. Only these selective cases are included in this study.

On the presentation these patients were resuscitated on the Standard Shock Protocols. In addition Octreotide infusion was started with the assumption of esophageal bleed at a rate of 25ug/ hour. Endoscopic Variceal Sclerotherapy was done with Ethanolamine Oleate 02ml/varix with a total dose of 20ml/session. They were managed on Octreotide Infusion at the rate of 25ug/hour continuously for five days. Control of bleeding, rebleeding and mortality were assessed.

Age: Mean age in male was 43 +/- 8 years. Mean age among female was 50+/-09 years.

Sex Male to female ratio 3.4:1

History

- HBs Ag Status, 26.9% positive,
- Anti HCV Status 65.2% positive,
- Both anti HCV and HBsAg positive 6.06%
- Both anti HCV and HBsAg negative 2.02%

Criteria for active bleeding:
Active bleeding was defined if at least one of the following finding was present;

- Hematemesis or melena in the pervious 3 hours,
- Hematemesis or melena >3 hours if the systolic pressure was< 80 mm Hg,
- Presence of fresh blood in the stomach on the emergency esphagogastroduodenoscopy (EGD).

Criteria for source of bleeding
Active bleeding from lesion was defined if at least one of the following was present;

1. Active bleeding from a lesion seen on endoscopy.
2. Sign of recent bleeding from the lesion (white nipple sign or adherent clot),
3. Single lesion without any other potential source of bleeding.

Criteria for control of bleeding

1. Absence of hemetemesis or melena for the consecutive 24 hours.
2. Hemodynamic stability and maintenance of hemoglobin concentration without blood transfusion for consecutive 24 hours.
3. Absence of signs of bleeding and blood clot in control gasteroduodenoscopy.

Results:
Though various etiological factors cause hepatic failure, cirrhosis and consequent esophageal bleed in our study yet the Hepatitis B and Hepatitis C are the main culprits.

Main sufferer of the disease is the young and middle age population. Male are predominant with male to female ratio of 2.3 to 1.

The combined use of Octreotide infusion with the Esophageal Variceal Sclerotherapy controlled the bleeding effectively in 80% of patients. In 10% patients redo Sclerotherapy with double dose of Octreotide was used to control the esophageal bleed. It is evident that in spite of all the resuscitative efforts 10% of patients were not able to sustain the mortal blow of this killer disease and they died.

Discussion:

Prognosis of upper gastrointestinal bleeding has much improved in the last two decades. Initial management stops bleeding in 90% of patients[4]. Patients with active bleeding or non bleeding visible vessel show better outcome with Endoscopic therapy than with medical therapy[5]. Somatostatin is extensively studied in clinical and research trials. Being short lived promoted research for a longer acting analogue. Octreotide is one of such analogues. Despite of its 40 times longer half life its effects are as short as Somatostatin[6].

Addition of Sclerotherapy significantly improves the efficacy of Somatostatin especially in shocked and actively bleeding patients[7]. Variceal Ligation alone compared with the combined ligation and Octreotide had no immediate difference in control of bleeding but the rebleed rate war significantly reduced i.e., 18 versus 04, number of blood transfusion was lower[8].

The combination of ligation, nadolol and sucralfate (triple therapy) proved more effective than banding ligation alone in term of variceal recurrence and upper gastrointestinal rebleeding as well as variceal rebleeding[9]. Nadolol plus Isosorbide Mononitrate is significantly more effective than nadolol alone. No side effect or deleterious effect is seen on ascites[10]. Terlipressin and Sclerotherapy are equally effective therapies achieving the initial control of variceal bleeding and preventing early rebleed[11].

Long term Addition of Isosorbide Mononitrate improves the efficacy of Propranolol in prevention of variceal rebleeding in cirrhotic patients[12]. Patients who discontinue B Blockers experience more mortality compared with an untreated population. These observations support the current practice of indefinite prophylactic therapy[13].

Variceal band ligation and Propranolol are equally effective in the variceal bleeding control[14].

Jugular Intra hepatic Porto Systemic shunt (TIPS) is more effective than Sclerotherapy in the prevention of both early and long term variceal bleeding[15].

Increased portal pressure is main determinant of treatment failure and survival in variceal bleeding and early TIPPS placement reduces treatment failure and mortality in high risk patients[16].

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