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Metal Clip in the Treatment of Acute Esophageal and Gastric Variceal Bleeding in Patients with Liver Cirrhosis under Endoscopy

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Keywords

Liver Cirrhosis with Acute Esophageal and Gastric Variceal Bleeding; Endoscopy; Metal clips; Sclerotherapy

Introduction

Acute esophageal and gastric variceal bleeding is a common clinical emergency, while endoscopic esophageal variceal sclerotherapy (EVS) has been widely considered an effective treatment for acute esophageal and gastric variceal bleeding because of its higher emergency hemostasis success rate (about more than 90%) [1,2]. At the same time, elective repetitive sclerotherapy can effectively eradicate esophageal varices, thereby significantly reducing the rate of rebleeding. However, more and more studies report that the occurrence of complications about sclerotherapy is up to 10%-33%, resulting in re-evaluation of the role and advantages of sclerotherapy [3]. To date, metal clips are mainly applied to the treatment of gastrointestinal ulcers, polyp resection, cardia mucosal tear, Dieulafoy disease and so on. The mechanism is same to the surgical vascular suture or ligation, which has simple operation, good hemostatic effect and can be easily repeated [4]. But Yu Li [5] considers that it's not suitable to stop the esophageal or gastric variceal bleeding by the use of metal clip based on the medical history and endoscopic diagnosis. The aim of writing this article is to explore whether the titanium plate is also suitable for the treatment of acute esophageal and gastric variceal bleeding and the analysis is summarized as follows.

Instruments and Methods

Instrument

Olympus HIF-H260 electronic endoscopy, Olympus HX-5LR-1 endoscopic hemostatic clip placement, Olymups MD-850 metal titanium clip, polyglycol, endoscopic needle, norepinephrine Ice and so on.

Methods

Patients who got active bleeding in the treatment of sclerotherapy or the acute esophageal variceal bleeding can use metal clips for hemorrhage. The release of the titanium clip was inserted through the endoscopic biopsy tract, and it's time to place the clip vertically to the target vessels when the distance between clip and lesion is about 3cm. The number of clips depends on the size and length of the lesion. The pliers were broken off from the release device and the second titanium clip was prepared to put in until the bleeding stops [6].

Using the saline to rinse the surface of lesion repeatedly in order to confirm the location of metal clips and the injection site correctly. No blood bleeds from the lesion means the success in hemostasis after conservation about one minute.

Results

The patient was in hospital because of the acute gastric variceal bleeding (Figure 1). We used 2 clips to close the lesion on both sides and the bleeding stopped immediately (Figure 2 and 3). The review of endoscopy showed gastric varices disappeared. Another patient who had esophageal varicose veins found three moderate varicose veins (RC+++), through gastroscopy, two of veins got the sclerotherapy and the other had 3 metal clips closed to treat the varicose veins (Figure 4).

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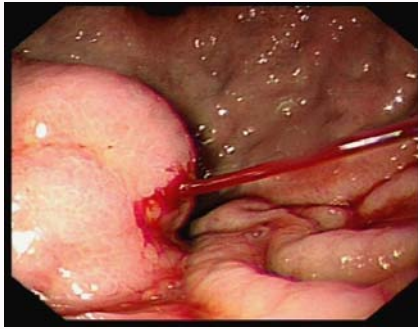


Figure 1: acute gastric variceal bleeding.

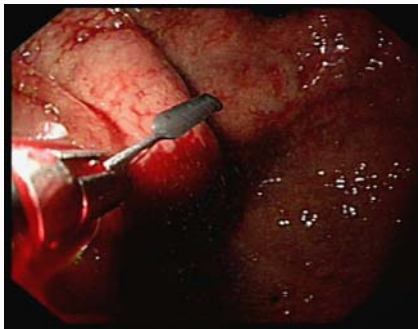


Figure 2: using clips to stop the bleeding.

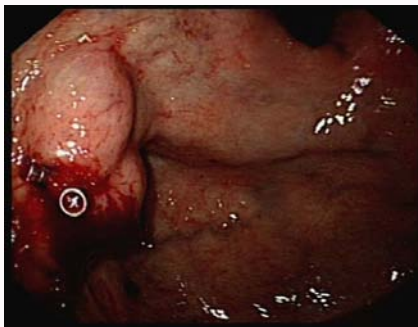


Figure 3: Theclips are closed and the bleeding stops.

The review showed that the metal clip did not fall off but the severity of varicose veins was significantly better than the treatment of sclerotherapy.

Discussion

Treatments for acute esophagogastric variceal bleeding include medication, endoscopic treatment includes endoscopic sclerotherapy (EST) and endoscopic band ligation (EBL), compression hemostasis by the Sengs taken-Blakemore tube, transjugular intrahepatic portosystemic shunt (TIPS), and surgery. In recent years, metal clips and esophageal metal stents have been reported for the treatment of esophageal variceal bleeding [7].

The results of this study show that metal clip treatment are better than simple sclerotherapy in the aspects of hemostasis time, rebleeding rate and the incidence of complications, which has less trauma, easier operation, higher success rate, fewer complications and medical expenses. It's effective for acute esophageal and gastric variceal bleeding treatment and can be used as a remedial measure after simple sclerotherapy which cannot prevent the occurrence

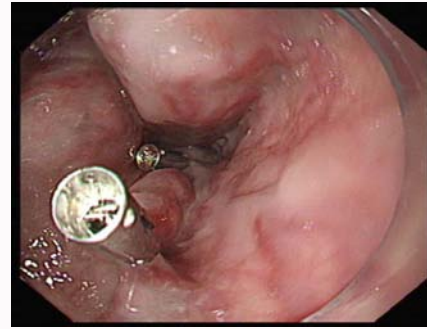


Figure 4: Using clips to close gastric varicose veins.

of active bleeding. It has a certain clinical application value. The mechanical force generated by clip after the closure of the lesion can tighten the blood vessels and the surrounding tissue together to cut off the blood flow and close the wound with the purpose of immediate hemostasis. It only causes so minimal damage to the wound that the bleeding can quickly stop and don't need special treatment. Usually the metal clip will fall off and excreted by the digestive tract after 1-3 weeks because of the formation of granulomatous tissue generated by inflammation. Therefore, it will not cause intestinal damage and have generally no complications.

The successes of this matter are closely related to the operator's proficiency and the cooperation between operator and assistant. In the course of treatment the lesion should be washed by saline and attracted by negative pressure suction device, try to keep the vision clear and the surface is fully exposed. Then try to adjust the angle between titanium clip and hemorrhage lesion after careful observation, place the clip vertically with moderate strength and clamp quickly, the clip will be tightened on both sides of the lesion to block the blood flow, otherwise, clips will fall off prematurely and easily lead to rebleeding.

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