Endoscopic variceal ligation in children with extrahepatic portal vein thrombosis: long-term follow up of 2 cases

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Endoscopic methods such as sclerotherapy and endoscopic variceal ligation (EVL) are considered highly effective in the treatment and prophylaxis of recurrent esophageal variceal bleeding. EVL is a treatment of option for preventing a first bleeding episode and for the treatment of acute and recurrent variceal bleeding in adult patients [1,2]. Limited data are available regarding this treatment option in children, although it is considered highly effective and is recommended by most pediatric experts [3]. We report our experience regarding two pediatric patients who suffered from extrahepatic portal vein obstruction (EHPVO).

The first case is a 3-year-old boy referred to our department for evaluation of hepatosplenomegaly noticed at the age of 7 months. The patient's physical examination was normal, while the laboratory investigation revealed thrombocytopenia and normal blood clotting tests. Portal vein catheterization confirmed the diagnosis of portal vein thrombosis (PVT). Due to esophageal varices grade I revealed by upper gastrointestinal (GI) endoscopy propranolol was commenced, and was discontinued one month later because of its adverse effects. All the esophageal varices (EV) were eradicated by EVL and no recurrence was observed upon repeated endoscopies over an 8-year follow-up period. The patient, now 11 years old, has not experienced episodes of GI bleeding but his liver function deteriorated. A recent magnetic resonance venogram (MRV) indicated cirrhosis.

The second case is a 6-year-old boy presented at our emergency department with hematemesis and hypovolemic shock. On clinical examination the child's spleen was palpable 3 cm below the left costal margin. After resuscitation, the patient underwent an upper GI endoscopy revealing grade II gastroesophageal varices. PVT was confirmed by MRV, with normal blood clotting tests. The patient underwent 3 successive EVL sessions until variceal obliteration was achieved. In ultrasonography 7 years later the liver appeared cirrhotic. The liver synthetic function has been well preserved and the endoscopy of the gastroesophageal junction revealed normal findings during the follow up.

Pharmacologic therapy, endoscopic methods and surgical portosystemic shunting have been used to treat EV in patients with PVT. Data on long-term efficacy and safety of these methods in children are scarce deriving mainly from case series [4,5]. β-Adrenergic blockers in adults are not routinely used in children because of unproven efficacy and significant adverse effects [6]. The main advantages of EVL over sclerotherapy are the need for fewer endoscopic sessions and lower complication and relapse rates [7]. Zargar et al showed that in children treated for bleeding EV, bleeding and major complication rates in the sclerotherapy group were significantly higher [8]. There is currently insufficient evidence to support a role of EVL for primary prevention in children [9].

In conclusion, our two cases indicate that EVL for primary or secondary prophylaxis of variceal bleeding in children with EHPVO is well tolerated, effective, reduces morbidity, and improves quality of life in the long-term follow up. A concern in children with EHPVO is the development of cirrhosis long-term, as in our cases, thus future studies are warranted to establish prognosis after EVL application in these patients.

References