

Leading Article

Variceal bleeding in children: Can we improve its outcome?

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Gastrointestinal (GI) bleeding in children is relatively common and in most cases the bleeding has a short duration. In upper GI bleeding experience has shown that in most children bleeding stops spontaneously regardless of source, before or after hospitalisation¹. After confirming that the child is bleeding from the upper GI tract, it is important to stabilise the child. In children, blood pressure can be maintained despite near fatal volume depletion. Thus, attention to heart rate and perfusion is essential in the assessment of paediatric patients with GI bleeding¹. Oxygen administration, maintaining an adequate airway, insertion of large bore cannula with administration of crystalloid followed by blood transfusion are resuscitative measures. Passing a large bore nasogastric tube will not only help decompress the stomach but will help to confirm that the child is having upper GI bleeding. Overtransfusion is counterproductive as it increases portal pressure and hence the bleeding. Once the child is stabilized it is now common practice to refer for upper GI endoscopy. This facility is available in most hospitals in Sri Lanka and helps locate the source of bleeding. By this method the source of bleeding can be found in about 90% of cases if performed within 24 hours of the bleed. It is known that even in patients with established liver disease and portal hypertension the source of bleeding could be gastric or duodenal ulcer rather than the varices². The disadvantage of performing endoscopy in children is that it needs general anaesthesia and the child should be stable to undergo anaesthesia. However, even when endoscopy facility is available in the periphery, because of non availability of willing anaesthetists to provide emergency anaesthesia for children, we find that transfers to Children's Hospital in Colombo take place. Our experience is that a fair number of these children come to Children's Hospital in Colombo from all corners of the country.

The commonest cause of recurrent upper GI bleeding in children as seen at Children's Hospital in Colombo,

is due to oesophageal varices. It is generally accepted that children with varices due to presinusoidal disease have a better long term prognosis than children with varices due to post sinusoidal disease, the latter mainly being due to liver diseases such as biliary atresia, Wilson's disease chronic hepatitis etc. Due to limited resources available to us, it is important to identify which patients have a better prognosis as it may be more effective to use these resources in them. Patients who have underlying liver disease, like biliary atresia and other forms of cirrhosis, ultimately succumb to their disease although they may survive an acute episode of upper GI bleeding. In this context, it is important to investigate these patients with oesophageal varices to find out their underlying pathology. At present we do not have data as to what percentage of children with variceal bleeding have pre sinusoidal disease and what percentage of children have post sinusoidal disease. If we are to improve long term results of variceal bleeding it is important to utilize the limited resources effectively in presinusoidal disease so that mortality due to an acute bleed can be reduced resulting in better long term survival as mortality due to end stage liver disease who bleed due to postsinusoidal disease cannot be improved in the absence of a liver transplant program.

Endoscopic sclerotherapy is the treatment of choice at Children's Hospital in Colombo for bleeding varices at present. After confirming the bleeding varices, we carry out several sessions of injecting varices at 4-6 week intervals till varices disappear.

Variceal band ligation is another method of treatment of acute variceal bleeding very well established in adults³. As in adults, in older children this may be more effective than injection sclerotherapy. However, this is not freely available in the government sector as it is expensive. At present most patients have to purchase this rubber band which is available locally.

Development of gastric varices in patients who have had their oesophageal varices sclerosed has been the cause of death in a few of our patients as these cannot

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be injected with standard sclerotherapy. Injection of tissue glue has been shown to be effective⁴ but is not available freely at present.

In the present era of hepatitis B and C as well as HIV infection, screening of patients for these infections and active immunization of non hepatitis B probably will also improve long term results. Unless we take these into consideration, endoscopy in the treatment of variceal bleeding will be another fruitless exercise.

The use of pharmacological agent octreotide in an acute bleed has also been shown to be equally effective to emergency endoscopic sclerotherapy in adults⁵ and some anecdotal reports suggest that the results are probably similar in children. It may be worth trying to make this intravenous medication available at least in the larger hospitals.

In conclusion, although making endoscopy available has helped in the management of some patients with acute variceal bleeding, unless we have an effective, closely coordinated program of proper follow up, we will not see many long term survivors of children with variceal bleeding. Patients with either good liver function or presinusoidal disease need to have better follow up facilities and close monitoring with a team approach. The paediatrician and the surgeon both need to be involved in the follow up. Making available new developments may also be useful.

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