

Congenital Venous Malformation in an 8-year-old Female Child treated with Ethanol Injection

Venous malformations (VMs) are the slow-flow vascular malformations that are most frequently referred to specialized centers. They can also threaten the life of the patient because of bleeding, expansion, or the obstruction of vital structures. MRI imaging is the gold standard for the pretherapeutic evaluation of VMs. To diminish the volume of the malformation, percutaneous sclerotherapy is the standard treatment. The aim is to obliterate channels by causing damage to the endothelium with subsequent inflammation and fibrosis. We report our experience with use of ethanol for VMs ablation in an 8-year-old female child. [*P R Health Sci J* 2017;36:186-187]

Key words: Ethanol, Congenital venous malformation, MRI

A congenital vascular malformation (CVM) is defined as “an embryologically developed, inborn error of vascular morphogenesis leading to true structural anomalies”. The overall incidence of CVM is 1.5% in the general population. These malformations in both deep and

superficial venous systems and can be localized or diffuse. Two thirds of all CVMs are malformations of venous predominance (1). Larger venous malformations (VMs) may be difficult to remove with surgery. Incompletely removed lesions have a tendency to recur. Ethanol is used in many different medical

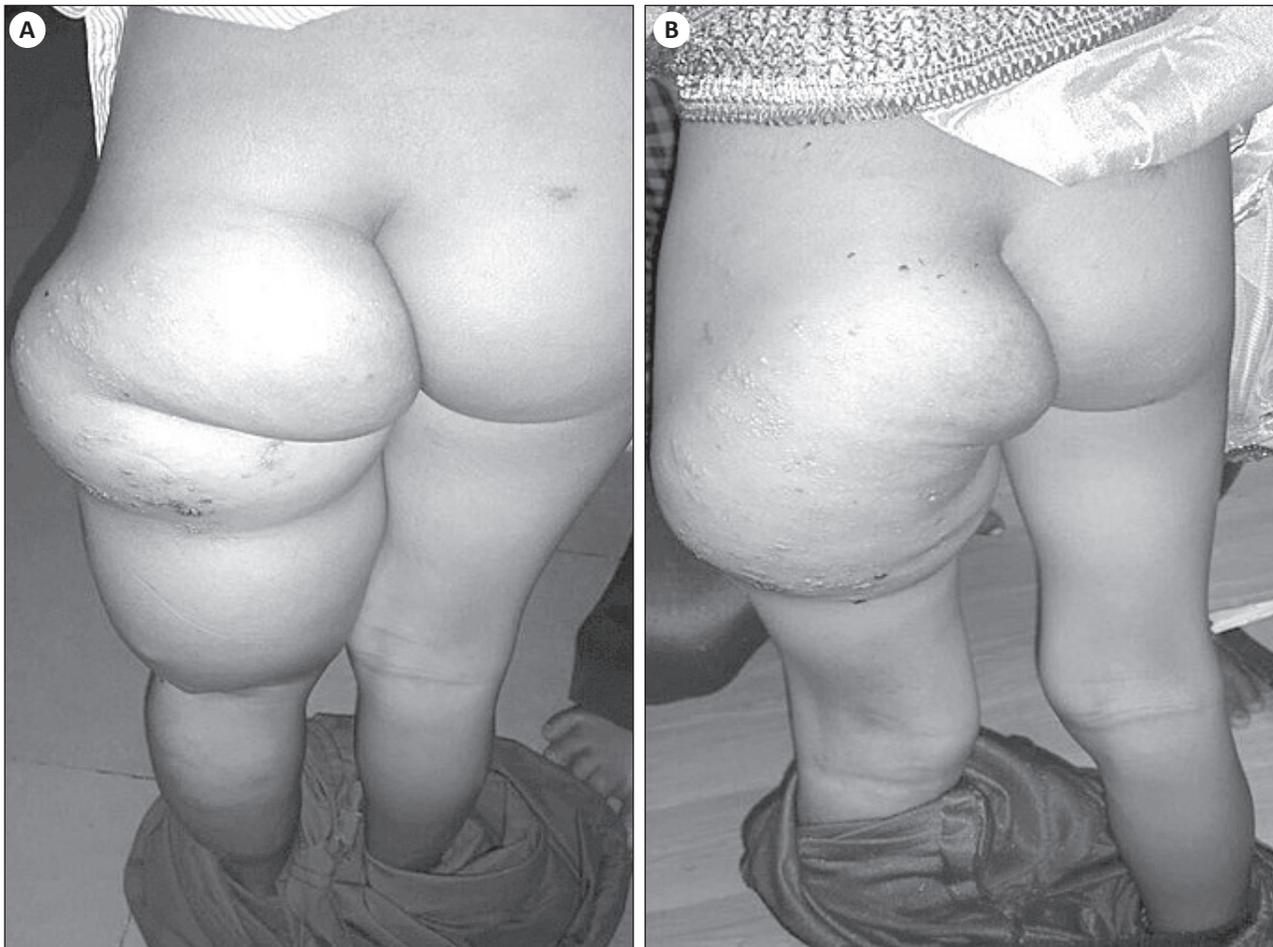


Figure 1(A). The patient had a huge venous malformation in her left leg that extended from the buttock to the mid-calf region (present since birth); a reduction in size was observed after 3 sittings of ethanol injections into the localized lesion (B).

applications, such as the ablation of renal and hepatic tumors (2). Ethanol can be used for the ablation of VMs (2).

Case description

We report our experience with the use of ethanol for the ablation of VMs in an 8-year-old female child. She had huge VMs in her left leg; they extended from her (left) buttock to the mid-calf region and had been present since birth (Figure 1A), diagnosed by MRI. Her weight was 16.5 kg and she had been appropriately immunized according to her age. Her vital and systemic examination were normal. All the lab parameters were within normal limits. Ethanol was injected under general anesthesia, with IITV guidance. The size of her VM was reduced after 3 sets of ethanol injections into localized lesions (Figure 1B). We did not observe any complications, such as tissue necrosis, or nerve paresis after the ethanol injections, except pain, which lasted for 4 days and which was treated with liquid paracetamol and ibuprofen (Combiflam syrup).

Brief discussion

MRI is the best imaging method for the diagnosis of VMs because it can distinguish low-flow VMs from high-flow arteriovenous malformations and fistulas (3). Ethanol is a safe, effective, well-tolerated, readily available, cost-effective

sclerosing agent that can be used to treat VMs without an incision. Ethanol causes necrosis of the vessel walls, with the slugging of red blood cells and subsequent thrombosis leading to the eventual production of intimal fibrosis related to ethanol's protein denaturation and its hydroscopic properties (2). Ethanol is superior to polidocanol, sodium morrhuate, and Ethibloc (4). It is also effective in recurrences after surgical removal.

Umang G. Thakkar, MBBS, DCH, Associate Professor, Department of Regenerative Medicine & Stem cell therapy and Department of Pediatrics; **Manish N. Raval**, MS, Department of Vascular Surgery; **Aruna V. Vanikar**, MD, PhD, DLitt, Department of Pathology, Laboratory of Medicine, Transfusion Services and Immunohematology; GR Doshi and KM Mehta Institute of Kidney Diseases & Research Centre (IKDRC) - Dr. HL Trivedi Institute of Transplantation Sciences (ITS), Gujarat, India. Email: umangpaedia@yahoo.co.in

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