

## Limb salvage in an extensive and complicated vascular lesion in an infant Sujata Sai, Manipal Hospital, India

### Abstract

**Background:** Extensive vascular lesions can endanger the life of a child by their virtue of consumptive coagulopathy or cardiac failure. A conservative surgical approach is difficult and can be life-threatening due to uncontrolled bleeding. We report successful limb salvage in an infant despite an extensive and infected arterio-venous malformation of upper limb, complicated by severe consumptive coagulopathy.

**Case Report:** A term male, 3.2 kgs, presented with a swelling over left arm detected antenatally. Antenatal scan- soft tissue swelling 10.8x6.8x5.4 cm from left shoulder to elbow with heterogeneous cystic spaces and minimal vascularity; O/E- non compressible, no bruit heard.

As the swelling was increasing in size, prednisolone was started at 1 mg/kg/day and slowly escalated to 3 mg/kg/day. However, he presented at 2 months of age with severe anemia and consumptive coagulopathy refractory to medical treatment. Investigations revealed features of consumptive coagulopathy (hemoglobin: 7.3 g/dL; total leukocyte count: 2160/mm<sup>3</sup>; platelet count: 76,000/mm<sup>3</sup>; prothrombin time: 35.2 s; international normalized ratio: 3.2; activated partial thromboplastin time: >120 s control-31 s; fibrin degradation product: >800 ng/mL; D-dimer: 4.2 mg/L; fibrinogen: 0.6 g/L). This was accompanied by a sudden increase in size due to infection within the tumor, which got ulcerated and began to discharge a bloody purulent fluid. He was given red blood cell, cryoprecipitate, and fresh frozen plasma transfusions.

**Investigations:** Doppler – hypoechoic lesion+ heterogeneous echotexture, numerous cystic spaces, weak color Doppler signal- S/O- Hemangioma. MRI- lobulated soft tissue mass 17x16 x9.5 cm with an intensive enhancement, necrotic and hemorrhagic areas, involving flexor and extensor muscles of the arm. Supplied by branches of axillary and

brachial arteries. Diagnosed as- Hemangioma, hence was started on propranolol 0.5 mg/kg/day. At 4 months of age surgery became an imperative lifesaving mode of treatment.

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At that point, at four months of age, surgery became imperative as a lifesaving mode of treatment. The embolization was not considered as the lesion was infected, ulcerated, and was bleeding. After detailed discussion with parents, consent was obtained for excision with a probability of disarticulation of the limb.

**Operative procedure:** Planned for amputation/ disarticulation. Axillary vessels identified and controlled. Tumor excised into Flexor and extensor muscles preserved as much as possible. Radial nerve through the tumor was divided and re-anastomosed. Disarticulation was hence avoided. Arm and hand movements preserved at 10mth follow-up.

**Conclusion:** A conservative limb salvage surgery is possible even in case of an extensive vascular anomaly. A good vascular control is a must to prevent life threatening hemorrhage in

a conservative surgery.



**NOTE:** This work is partly presented at 2<sup>nd</sup> International Conference on Pediatrics, Neonatology and Healthcare on April, 16-17, 2020 at Amsterdam, Netherlands.

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