CONGENITAL VENOUS MALFORMATION - K-T SYNDROME

INTRODUCTION

Venous malformations (VM) are a heterogeneous group of vascular anomalies characterized by abnormal expansion of the venous compartment. They can be classified into three main types: capillary, venous, and veno-lymphatic. VMs are often asymptomatic, but they can cause significant morbidity if they are large or located in critical areas such as the brain, spinal cord, or extremities.

BACKGROUND

- Venous malformations (VM) are the most common type of vascular anomaly.
- They can range from small localized areas to large, extensive lesions that involve multiple body parts.
- VMs are often classified based on their location and clinical presentation.
- They can be associated with other congenital anomalies, such as Klippel-Trenaunay syndrome (KTS), Parkes-Weber syndrome, and Proteus syndrome.

MATERIAL & METHODS

- Laser ablation & Embolisation with Absolute Alcohol & sclerosing agents is done in Single lower limb of 29 young patients (Age group 4-18 yrs) operated in 2012-16.
- All of these patients selected for procedure by prior 'Venous Doppler study', 3T MRI Scan of soft tissue (spin echo T1 & T2 fat saturation & inversion recovery) and 'DSA Contrast Venography' with closed space direct puncture venography.
- Laser therapy is unimpressive unless A-V Fistula is there.
- Compression garments for localized painful distention, Analgesics & Anti-inflamatory (NSAID) for superficial phlebitis & local thrombosis.
- Percutaneous sclerotherapy by using Inj. Polidocanol or Inj. Sclerol (STD) for cavernous venous lesions.
- Absolute Alcohol embolisation for venous lesions infiltrating skeletal muscle, Double needle sclerotherapy for wide spread malformation and Endo-venous laser to ablate incompetent Great & short saphenous veins with patent deep venous system in congenital varicosity used.
- All patients followed in clinic at 1, 3, 6 mts & 2 yrs interval.

RESULTS

- Successful Thermal ablation observed in all congenital varicosity cases. Great & Short saphenous veins ablated with both types of diode Laser technology. Hemoglobin specific diode 980 nm with bare tip / fiberoptic emission laser fiber & Water molecule specific 1470nm wavelength painless laser with bare tip (603 micron) & single -2 ring Radial fiber (360 degree) on Biloletc AG Germany, Cerals class-4 laser machines.
- In all these cases Deep venous system found patent, No hypoplasia or Aplasia existed.
- Abnormal, dilated, intricate cutaneous & intra muscular localised venous channels successfully Embolised with Absolute Alcohol & sclerosant agents in 6 months span.
- No complications like acute venous insufficiency, intractable leg swelling or mortality documented in any case till date.

CONCLUSION

This study showed that Endovenous laser ablation for symptomatic superficial, abnormal veins, direct puncture embolisation for cavernous venous lesions and Absolute Alcohol embolisation for venous lesions infiltrating skeletal muscle, is a feasible, efficient & safe treatment of choice in these patients with congenital venous malformations (KT syndrome cases).

This combined role of therapy for CVM cases should be included as an innovative option by Vascular surgeons & interventional radiologist performing advanced, challenging venous interventions.

DISCLOSURES

MAC - Educational Grantee Awardee as per Euro Med Tech Ethical Business Protocol.

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