COMBINED ROLE OF LASER ABLATION, INJ. ETHANOL EMBOLISATION & FOAM SCLEROTHERAPY IN THE TREATMENT OF CONGENITAL VENOUS MALFORMATIONS (K-T SYNDROME) CASES...

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PURPOSE
To evaluate endovascular & Interventional Radiological procedures like Endovenous laser (Thermal) ablation, Inj. Ethanol (95% Absolute alcohol with Inj. Lipiodol / Embotraz Ethiodised Poppy seed oil as contrast agent & foam sclerotherapy) as a result oriented therapeutic option for the symptomatic patients having bleeding Tense, painful, spontaneous or superimposed thrombotic or infiltrating skeletal muscle lesions.

MATERIALS & 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 2012-18.
- All of these patients selected for procedure by prior ‘Venous Doppler study’, 3T MRI Scan of soft tissue and ‘DSA Contrast Venography’ with closed space direct puncture venography.
- Arteriography is unimpressive unless A-V Fistula is there.
- Compression garments for localized painful distended varicosities. Analgesics & Anti-inflammantary (NSAID) Medicines given for superficial phlebitis & local Venous thrombosis.
- Percutaneous Foam sclerotherapy done by using Inj. Polidocan or Inj. Setrol (STD) for cavernous venous lesions.
- Absolute Alcohol embolisation for venous lesions infiltrating skeletal muscle, 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 980nm with bare tip / frontal emission laser fiber & Water molecule specific 1470nm wavelength painless laser with bare tip (603 micron) & single -2 ring Radial fiber (360 degree) on Bioletec AG Germany, Ceralas class-4 laser machines utilised.
  - 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.

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