

Conclusions: SVC syndrome because of CVO is now amenable to interventional treatment. These patients go back to normalcy and maintenance hemodialysis immediately after the procedure. This is the largest reported series in India of SVC syndrome/CVO treated by Endovascular approach.

Endovenous Laser therapy by Laser blast technique for treating varicose vein – Experience of the largest series of 6,018 patients

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Background: Venous reflux is seen in about 8% of adult population. Till now surgery was considered to be the gold standard. Recently, Endo-Venous Laser Therapy (EVLT) has been used with great success with a recurrence rate of less than 7% after two years. This abstract discusses our results of 6018 successive cases of varicose veins treated by novel laser blast technique.

Methods: 6018 patients of severe sapheno-femoral incompetence were treated by EVLT using 25 watts Diode laser machine. Venous access was gained near the ankle using duplex scanning. A 5F sheath was inserted into the great saphenous vein and advanced upto 2 inches below the saphenofemoral junction. 810 μ m bare tip laser fibres were used and was advanced through the sheath. The position of the fibre tip was confirmed by the red light (at the tip) which is seen through the skin. The sheath and the fibre were then withdrawn while delivering the laser energy at a rate of about 1 mm/sec delivering about 12joules/pulse/sec. Individual perforators, short saphenous vein and extra-axial varicosities were treated and the completeness of the procedure was assessed by angiographic guidance. Patients were followed-up by duplex scan after one day, one month, six months and one year.

Results: N = 6018; Great Saphenous Vein (GSV) 3948, Short Saphenous Vein (SSV) 1520 and Both (GSV + SSV) 1428, Perforators 783.

Adjuvant Sclerotherapy / Perforator Ligation / ablation 140; Wavelength of LASER 810 μ m and System BIOLITIC.

Avg. lasering time 3 -5 mins, and avg. procedure time 62 mins
Procedural Success 6018/6018, Immediate Mobilisation 6018/6018

Complications included: DVT 17/6018, Pain 1268/6018, Swelling 78/6018, Ecchymosis 906/6018 and Pulmonary Embolism 0/6018.

Follow Up: Freedom from recurrence at 6 mnths - 97%; 12 mnths - 94%.

Conclusion: EVLT is an outdoor, quick, successful minimally invasive procedure to treat venous varicosities due to sapheno-femoral reflux. The patients' compliance is excellent, with very low recurrence rate of about 6%.

Prognostic value of plasma N-terminal pro-Brain natriuretic peptide and high sensitivity troponin T in patients with sepsis; correlation with C reactive protein level and 2D echocardiography

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Background: Increased levels of pro-BNP and Hs trop T as a predictors of cardiac dysfunction and prognosis in congestive heart

failure and ischemic heart disease have been identified. But only a few studies identify their role in septic myocardial injury. Base line parameters and the level of Hs Troponin T in distinguishing septic myocarditis from acute coronary events are also not well studied.

Aim: To determine the role of the pro-BNP and hS troponin T in the context of outcome of septic patients; to analyze their correlation with c reactive protein level and 2d echocardiography findings. Base line parameters and level of hS troponin in helping to distinguish septic myocarditis from acute coronary events were also evaluated.

Methods and Results: 100 consecutive patients with sepsis were included. Levels of pro-BNP, Hs troponin T, C reactive protein were measured on the day of diagnosis of sepsis. 2d echocardiography was performed on the same day and repeated on the day of discharge. Patients had myocardial injury diagnosed by elevated Hs Troponin T, and elevated pro-BNP. Patients with Pro-BNP level >4000 pmol/L had increased morbidity and the level >25000 predicted 90% mortality. Level of hS troponin T showed a linear correlation with pro- BNP levels, but pro BNP was more sensitive in prognostication. Level of Hs Troponin T >500 was indicative of an acute coronary event rather than septic myocarditis. This correlated with ECG and echo findings and later with coronary angiogram in selective patients.

Conclusion: Pro-BNP and Hs troponin T may serve as useful laboratory marker to predict survival in patients with sepsis. Serial evaluation of Hs troponin T may also help to distinguish septic myocardial injury from acute coronary events.

Interventional approach for management of acute deep vein thrombosis (DVT)

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Background: Although DVT of calf veins is most common, 40% of DVTs occur in the femoral and iliac veins and have a high risk of pulmonary thromboembolism and Post Thrombotic Syndrome (PTS), which can be avoided by timely interventional management. Catheter Directed Thrombolytic Therapy (CDTT) and Pharmacomechanical Catheter-Directed Thrombolysis (PCDT), (combination of CDTT with percutaneous mechanical thrombectomy) is the best possible solution. This dual mechanism of action enhances the efficiency and rate of thrombus removal. It also uncovers the May Thurner syndrome in many cases.

Methods: Diagnosis was made by Duplex scan and venography. Patients with DVT extending to common femoral vein and above were included. Popliteal vein was accessed under Duplex guidance and a 6F sheath was introduced. Suction thrombectomy was done using 6F multipurpose guiding catheter and a multi side hole infusion catheter was used to deliver continuous intra-clot tissue infusion of tPA for 24-48 hrs. More than 50% angiographic clearance of the thrombus was used as criteria of success and if May Thurner syndrome was uncovered, left common iliac vein was stented by self-expanding stents. Patients were then kept on oral anticoagulants, to maintain an INR of 2.5-3.5.

Results: N = 26; Duration of DVT: \leq 14 days.

Involvement: Femoral Vein = 26 ; External Iliac Vein = 20 ; Common Iliac Vein = 13 ; IVC = 3

Procedure: Thrombolytic agent tPA.

Aspiration Thrombectomy (AT) = 26/26 ; CDTT = 26/26.

Reduction of Thrombus load:

| | AT | CDTT | Stenting |
|---------------------|-----|------|----------|
| Femoral vein | 60% | 100% | 2/26 |
| External iliac vein | 60% | 100% | 6/26 |
| Common iliac vein | 50% | 80% | 8/26 |
| IVC | 25% | 60% | - |

Follow up: Mean – 1 year (8 months – 19 months); Recurrence of DVT – 2/26; PTS – 0/26 and Pulmonary Embolism – 0/26.

Conclusion: Interventional approach for acute DVT is successful, promising and feasible. Rapid removal and lysis results in preserving venous valve functions and reducing the incidence of PTS.

Stem cell augmentation for cardiovascular risk in Rheumatoid Arthritis: STAR study

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Background: Bone marrow derived stem cells, endothelial progenitor cells (EPCs), protect against atherosclerotic vascular damage. However, EPCs are depleted in RA and contribute to the enhanced cardiovascular (CV) risk. Therapeutic potential of augmenting EPCs to treat the heightened CV risk of RA has not yet been exploited. We aimed to investigate the effect of rosuvastatin on EPCs population, endothelial dysfunction, nitrite, adhesion molecules and on markers of inflammation in RA.

Methods: 50 RA patients, randomized to receive 24 weeks of treatment with rosuvastatin (10mg/day, n=25) or placebo (n=25) as an adjunct to existing stable antirheumatic drugs. EPCs (CD34+/CD133+) were quantified by Flow Cytometry. Flow mediated dilatation (FMD) was assessed by Angiodefender™ (Everest Genomic Ann Arbor, United States). Inflammatory measures included DAS28, CRP, ESR, Pro-inflammatory cytokines (TNF- α , IL-6 and IL-1), levels of serum nitrite, lipids and adhesion molecules (ICAM-1 and VCAM-1) was done at baseline and after treatment.

Results: At baseline, inflammatory measures, pro-inflammatory cytokines, adhesion molecules and nitrite levels were elevated and EPCs and endothelial function were impaired among both groups. At 24 wks: DAS28, ESR, CRP, TNF- α , IL-6, nitrite and ICAM-1 improved significantly in rosuvastatin group. EPCs increased significantly after treatment with rosuvastatin as compared with placebo. FMD improved significantly in the rosuvastatin group. Rosuvastatin exerted positive effect on lipids. Significant inverse correlation observed between EPCs and CRP, TNF- α , ICAM-1 and FMD after rosuvastatin treatment.

Conclusion: First study to show that rosuvastatin augments EPCs population in RA mediated by lowering the cytokine levels, which downregulates adhesion molecule, CRP and nitric oxide production. This defines a novel mechanism of rosuvastatin treatment in RA: the augmentation of EPCs with improvement in inflammatory disease activity and endothelial dysfunction.

New oral anticoagulants in atrial fibrillation

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Background: Atrial fibrillation (AF) is a common arrhythmia, and is an important cause of stroke. Risk of stroke and bleeding need to be assessed before initiating anticoagulant treatment. New oral anticoagulants (NOACs) are available now as an alternative to vitamin K antagonists (VKA).

Objective: Our objective was to study the incidence of valvar AF versus nonvalvar AF, the scores for risk of stroke and bleeding and the use of NOACs in a tertiary case hospital.

Methods: Cases of atrial fibrillation hospitalized or seen in out patient over a period of two years were studied. CHA2DS2VASc and HASBLED scores were applied to all cases of nonvalvar AF. Creatinine clearance was calculated by Cockcroft formula.

Results: There were 60 patients of AF, 30 being male. Mean age was 66.6 years overall, 62.6 years for male and 70.6 for female patients. 43 (71.6 %) patients had nonvalvar AF and 17 (28.4 %) had valvar AF. Of 17 cases of valvular AF, 04 had prosthetic valve and all were on VKA.

For the 43 patients of nonvalvar AF, the mean CHA2DS2VASc score was 2.8 and the mean HASBLED score was 1.5. Fifteen patients received dabigatran. Of these 15 patents, one shifted from VKA to dabigatran as she found frequent INR monitoring inconvenient. 35 opted for VKA for economic reasons and 5 declined to have any anticoagulation. In one patient, oral anticoagulation was not started since he had subdural hematoma. In four patients, oral anticoagulation was not indicated as the CHA2DS2VASc score was 0. Amongst 15 patients who received dabigatran, 11 were on 110 mg twice a day dose because of age, renal dysfunction and body weight, 4 were on 150 mg twice a day. All these patients tolerated dabigatran well.

Conclusion: There were more nonvalvar AF cases than valvar AF and female patients were older. CHA2DS2VASc and HASBLED scores are easy to apply and help in decision making on initiation of oral anticoagulants in nonvalvar AF patients. Dabigatran is an attractive alternative to VKA to prevent stroke in nonvalvar AF. Cost, compliance, comorbidities and coadministration of other drugs may be constraints for the use of NOACs.

To study Troponin T levels and its significance in relation to mortality and morbidity in acute ischemic stroke

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Background: Troponin T levels have been shown to have a very good correlation with cardiac stroke or myocardial infarction. In this study Troponin T levels were evaluated in patients of acute ischemic stroke.

It follows that Troponin T levels must have a correlation with morbidity and mortality in these patients (pt.).

Methods: Pt of acute ischemic stroke confirmed by CT scan or MRI within 72 hr of stroke onset, admitted in medicine ward of L.L.R and associated hospital in G.S.V.M medical college Kanpur and measurement of cTn T between 12-72 hr of stroke onset. There were 45 patients in study who were admitted over a period of January 2010 to September 2011.

Results: 17.8% of patients in study show rise in troponin T (>0.01mcg/dl) out of which 37.5% pt had poor outcome while