Noninvasive Treatment for CLI with a Sequential Compression Device: Does it Work?

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Sustained clinical improvement was reported in 68% of patients. Sustained hemodynamic improvement were noted with; Mean toe pressure increase from 39.9mmHg to 55.42mmHg post 12 months of treatment with mean difference in Toe Pressure of 15.49mmHg (95%CI=8.06 to 22.92, SD=30.92) P=0.0001; and Mean Popliteal flow increase from 35.44cm/sec to 55.91cm/sec 12 months post treatment with Mean Difference in Popliteal Flow of 20.47cm/sec (95%CI=14.02 to 26.91, SD=46.22) P<0.0001.

30 day mortality was 99.4%. Mean Amputation free survival rate was 18 months with limb salvage rate at 5 years of 94%. Freedom from MACE at 5 Years was 62.5%. All cause survival was 68.4% at 5 years. Ten patients underwent AKA and one had BKA. Out of fifty four who died from their co morbidities only five patients lost their legs before death.

Cox proportional hazard ratio showed that smoking, DM, CRF, hypertension and hypercholesterolemia did not have a significant impact on limb salvage or toe pressure improvement.

Estimated median Inpatient/Total cost of managing a primary-amputation patient is €29,815 compared to €3985 for SCBD.

Cost per Qualy for artassist was €1756. Q-TWiST was 20.48 for a total of 708 months of ArtAssist usage. We treated 170 patients with artassist at a cost of €681,965 with superior limb salvage rate. However primary amputation for 75 patients had cost €2,236,125 with poor QUALY and lower QTWiST.

Art-Assist SCBD is a valuable tool in the armamentarium for dealing with CLI patients with un-reconstructable PVD. It gives superior limb salvage, ameliorates amputation free survival, enhances ulcer healing rates, reduces length of hospital stay and provides rapid relief of rest pain without any intervention in patients with limited life expectancy.