Venous stenting and matrix metalloproteinase inhibitor provides a fast track solution to recalcitrant venous ulcer.

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Introduction

Venous ulcer is a common and recalcitrant problem. The estimated prevalence of active venous ulcers is 5 per 1000 population in Egypt. The mainstay of management has been compression therapy with or without interventions to correct superficial venous reflux. However, all strategies are known to be associated with a recurrence rate up to 50%. Persistent ulcers due to reflux have been addressed by valvoplasty and valve transposition with variable grades of success. Deep venous obstruction contributes largely to the development of venous stasis. The combination of reflux and obstruction gives the highest levels of venous hypertension and the most severe symptoms compared with either alone while matrix metalloproteinase (MMP) is considered to be a leading factor for skin breakdown and the recurrence of ulcer.

Method

Forty Patients with C6 disease who failed a trial of adequate compression therapy or superficial vein interventions were enrolled in the study. Diagnosis was done by US, transfemoral venography, CTV, MRV, and IVUS. All patients were subjected to venous angioplasty deploying an average of 1.9 stents then maintained for 2 years on MMP inhibitor.

Results

Primary patency of the stents was 85% and secondary patency was 100% by the end of the first year. Ulcer healing was achieved in 60% of patients within 2 months, in 75% within 3 months and in 100% within 6 months and maintained for the 2 years of follow-up.

Conclusions:

1-Stenting alone achieved a success rate of 54% in ulcer healing

2-Trials on MMPIs were disappointing when used as a sole treatment of venous ulcers because there were some limitations of MMPi as
   a) Limited bioavailability, and little specificity for individual MMPs.
   b) Inhibitors are rapidly metabolized by the liver and require frequent dosing to maintain therapeutic plasma drug levels but this was overcome by using both local and systemic therapies

3-Stenting combined with MMPIs may facilitate finding potential therapeutic strategies in managing patients with advanced complications of chronic venous insufficiency