

Clinical experience and successful use of Taurolidine drain assisted irrigation as salvage therapy in 3- complex cases of Femoro-popliteal prosthetic graft Infection

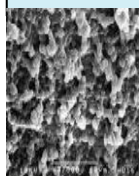
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Introduction

An infra inguinal prosthetic graft infection is a serious complication of vascular surgery. In most cases removal of graft is required to save the patients life and in selected cases, a reconstruction is required to save the limb..(1) The associated mortality and morbidity is very high. (2,3) In selected cases , however preservation of graft is possible.

Colonization of bacteria around infected prosthetic materials and forming a biofilm around the graft will lead to non incorporation of graft in body and also protect the bacteria to survive around graft been shielded from bactericidal concentrations of antibiotics and host defence mechanisms.

Taurolidine is derived from Taurine, and has got Antimicrobial and Anti-Lipoplysaccharide properties. Irrigation of grafts in situ with Taurolidine in peri operative period will prevent formation of biofilm by bacteria while healing process is incorporating the graft in surroundings (4)



Catheter with heparin lock: 7 month implanted : S. epidermidis biofilm completely covers surface.



Catheter with TauroLock 5 month implanted: no microbial colonization.

Methods

Three patients with postoperative infra-inguinal prosthetic graft infections who were systemically stable, had the following

- 1) Operative drainage of perigraft collection
- 2) Curettage of the organized bio film around graft
- 3) Lavage with saline and peroxide
- 4) Post op drain assisted irrigation with Taurolock
- 5) Peri- operative short course of systemic antibiotics



Fig: Operative photograph of infected femoral popliteal graft with perigraft collection



Fig: Biofilm on the infected synthetic graft

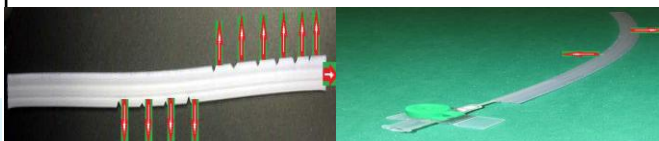


Fig: Drain used for Taurolidine flush

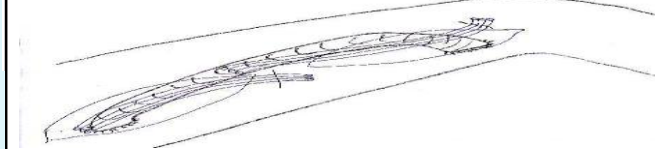


Fig: Drains position around grafts

Results

After 3 months of follow up All the patients were

- 1) Infection free clinically
- 2) Inflammatory markers normal limits and negative cultures
- 3) Patent grafts with well perfused limbs



Fig: 3 months post operative healed wounds, well perfused limb

Conclusions

1. Aggressive local clearance of infection coupled with irrigation of Taurolidine appears to be effective in selected cases
2. Taurolidine irrigation is simple to use
3. Need of further randomised studies

References:

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3. Zeltsman D et al, "Management of vascular prosthetic infections: results of long-term follow-up", Am Surg. 1999;65(4):331-333 [PubMed]
4. Thomas M Bergamini, Dennis F Bandyk. " Infections of Vascular Prosthesis caused by bacterial Biofilms" Journal Of Vascular Surgery 1988; 7:1 PP 21-30.