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**The Use of Nanocrystalline Silver for the Treatment of Massive Soft Tissue Defects with Exposed Bone**

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Abstract

**Background:** In a complex wound with exposed tendon, joint or bone caused by trauma, soft tissue reconstruction is required to obtain function and aesthetic coverage. Surgical reconstruction can be performed using a variety of different techniques.

**Objective:** The authors report their experience using a nanocrystalline silver with or without vacuum assisted wound closure to salvage the exposed vital structures such as bone, joint or tendon in traumatic wounds.

**Material and Method:** The present study included 12 patients with 15 wounds that exposed vital structures especially in the lower extremities. After adequate debridement, four wounds were treated with nanocrystalline silver dressing and vacuum assisted wound closure, and ten wounds were treated in an out-patient program using nanocrystalline silver dressing.

**Results:** A preliminary evidence of impressive result was achieved with subsided infection and complete bony coverage by granulation tissue after treatment. Subsequently, a secondary healing or a split thickness skin graft was applied.

**Conclusion:** The authors present the satisfactory results of alternative techniques that may be used for the massive soft tissue defects with exposed bone.

**Keywords:** Exposed bone wound, Nanocrystalline silver dressing, Vacuum assisted wound closure

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