

Soft Tissue Cover In Compound Injuries

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The prevention of infection and infected nonunions are the objectives of managing these injuries.

The key messages are:

1. Early broad spectrum antibiotic administration but restricted to 72 hours
2. A meticulous and timely debridement of soft tissue and bone
3. Early definitive soft tissue cover within 3 days if possible and, if not, use of vacuum dressings temporarily

The available evidence emphasizes these points. The type of fracture stabilization, often the issue that comes foremost for most Orthopaedic surgeons, is less influential on the outcomes of infection, re-operation or non-union.

Soft tissue cover should be delivered by those well versed in both local and distant soft tissue transfer. The manner by which wound extension is created by the surgeon performing debridement can influence the options available for local tissue cover. Local flaps based on viable perforators can work. Some local flaps which work well in the context of late reconstructive surgery do not share the same success when used in trauma. Distant free flaps then become the mainstay for such clinical situations. The type of flap used will depend on the level on the limb needing cover, the size of the soft tissue defect, the zone of injury, the state of local tissue and remaining perforating vessels and, with some evidence to support this, whether the soft tissue cover is to aid in fracture healing. Wound closure through prolonged use of vacuum assisted dressings and split thickness skin grafts may succeed but results in fragile and tenuous cover in the tibia which may be subject to repeat breakdowns.

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