

## Negative Pressure Wound Therapy in Complex Injuries of the Limbs

**Authors :** Mihail Nagea, Olivera Lupescu, Nicolae Ciurea, Alexandru Dimitriu, Alina Grosu

**Abstract :** Introduction: As severe open injuries are more and more frequent in modern traumatology, threatening not only the integrity of the affected limb but even the life of the patients, new methods desired to cope with the consequences of these traumas were described. Vacuum therapy is one such method which has been described as enhancing healing in trauma with extensive soft-tissue injuries, included those with septic complications. Material and methods: Authors prospectively analyze 15 patients with severe lower limb trauma with MESS less than 6, with considerable soft tissue loss following initial debridement and fracture fixation. The patients needed serial debridements and vacuum therapy was applied after delayed healing due to initial severity of the trauma, for an average period of 12 days (7 - 23 days). In 7 cases vacuum therapy was applied for septic complications. Results: Within the study group, there were no local complications; secondary debridements were performed for all the patients and vacuum system was re-installed after these debridements. No amputations were needed. Medical records were reviewed in order to compare the outcome of the patients: the hospital stay, anti-microbial therapy, time to healing of the bone and soft tissues (there is no standard group to be compared with) and the result showed considerable improvements in the outcome of the patients. Conclusion: Vacuum therapy improves healing of the soft tissues, including those infected; hospital stay and the number of secondary necessary procedures are reduced. Therefore it is considered a valuable support in treating trauma of the limbs with severe soft tissue injuries.

**Keywords :** complex injuries, negative pressure, open fractures, wound therapy

**Conference Title :** ICAOS 2017 : International Conference on Advances in Orthopaedic Surgery

**Conference Location :** Paris, France

**Conference Dates :** March 29-30, 2017