



TOPICAL NEGATIVE PRESSURE* (TNP) AS A TREATMENT MODALITY FOR SURGICAL SITE INFECTION IN CARDIAC SURGERY. A PROSPECTIVE ANALYSIS OF 37 CASES

Martin Simek¹, Petr Nmec¹, Bohumil Zalesak², Roman Hajek¹, Lenka Jecminkova¹

¹Dept of Cardiac Surgery, University Hospital Olomouc, Olomouc, Czech Republic, ²Dept of Plastic Surgery, Olomouc, Czech Republic

Aim: TNP* was primarily introduced for the treatment of pressure ulcers or chronic debilitating wounds. Recently, the TNP has represented an encouraging treatment modality in the field of cardiac surgery, providing superior results compared with conventional treatment strategies.

Method: From November 2004 to September 2006, 37 patients, undergoing TNP for surgical site infection following cardiac surgery, were prospectively evaluated. Four patients (11%) were treated for extensive leg-wound infection, 10 (27%) were treated for superficial sternal wound infection and 23 (62%) for deep sternal wound infection. The median age was 69.7 years (range 48 to 82) and the median BMI was 33.2 kg/m² (range 28 to 41). Twenty patients (54%) were women and diabetes was present in 19 patients (51%). For the reason of wound infection complications, 16 patients (44%) were readmitted to the department. The TNP was employed after the previous failure of the conventional treatment strategy in 7 patients (19%).

Results: Thirty six patients (97%) were successfully healed. One patient (3%) died of multiple organ failure. The overall length of hospitalization was 34.6 days (range 9 to 62). The median number of dressing changes was 4.6 (range 3 to 10). The median TNP treatment time until surgical closure was 9.2 days (range 6 to 21 days). The TNP was solely used as a bridge to the definite wound closure. Four patients (11%) with chronic fistula were re-admitted with the range of 1 to 6 months after the TNP.

Conclusion: The TNP is a safe and reliable option in the treatment of surgical site infection in cardiac surgery. The TNP can be considered as an effective adjunct to conventional treatment modalities for the therapy of extensive and life-threatening wound infection following cardiac surgery.

* V.A.C.