

**THE USE OF TOPICAL NEGATIVE PRESSURE 'TNP' IN A SURGICAL UNIT IN A DISTRICT GENERAL HOSPITAL, A 4 YEAR REVIEW**

A. Ibrahim Amin, Anne Ballard-wilson

*Queen Margaret Hospital, Dunfermline, Fife, United Kingdom*

**Aim:** the aim of this study is to assess the use of 'TNP' in a Surgical unit in a District General Hospital serving a population of 350,000.

**Methods:** Data of 65 patients who developed severe primary skin infection, superficial or deep wound dehiscence requiring 'TNP' in our Surgical unit between January 2004 and December 2007 was collected prospectively and outcome analysed. Furthermore, the use of 'TNP' in the management of the open abdomen in that period was included in this study.

**Results:** Of the 65 patients there were 35/65 (54%) males, the median age was 61 (range 30-89) years, 72% were emergency admissions and 51% of those were treated with 'TNP' in 2007. 34% of patients underwent emergency surgery for severe peritonitis. 35% of patients were markedly obese, 20% diabetic and methicillin-resistant Staphylococcus aureus bacteria (MRSA) were identified in 42% of cases. 6/65 patients developed severe primary skin infection requiring debridement and 'TNP' with a median length of treatment of 10.5 (range 3-60) days. 37/65 patients developed superficial wound dehiscence with a median length of treatment of 16 (range 3-60) days. 7/65 suffered deep wound dehiscence with a median length of treatment of 27 (range 5-56) days. The abdomen was left open as laparostomy in 15/65 patients, in 8 cases we were unable to close the abdomen and in the remaining 7 cases it was unwise to close the abdomen due to severe peritonitis. In 4 patients a combination of mesh and 'TNP' was used, in the remaining 11 a combination of special abdominal dressing system and 'TNP' were used. Primary closure was achieved in 6/15 patients in 2 weeks or less, further 6 developed incisional hernia and 3 patients died.

**Conclusions:** There was a three fold increase in the use of 'TNP' in the last year in our Unit. Its use in the management of the open abdomen can provide a vital bridge to closure of the abdominal wall. To be effective it should be initiated in theatre which was the case in all of our laparostomies, hence the relevant hardware should be available in theatre on demand, and furthermore Surgeons as well as Nursing Staff should be familiar with their use to achieve optimal outcome. Its use in the open abdomen requires further evaluation and randomised studies are needed to establish its place in these difficult situations.