



Service Priorities and Programmes Electronic Presentations

Convention ID: 1188

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Negative Pressure Wound Therapy: The Application in Orthopaedics Patients

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Keywords:

Negative pressure wound therapy
orthopaedics

Introduction

Negative pressure wound therapy is widely used in managing and accelerating wound healing. NPWT is a non-invasive system that creates a localized controlled sub-atmospheric pressure environment which promotes wound healing (Moues, Heule, & Hovius, 2011). The usage of NPWT becomes popular in recent years, the efficacy of NPWT in wound management become controversial. An evidence based practice is important for nurses to improve patient care and achieve best clinical outcomes (Majid, Foo, & Mokhtar, 2011). So it is worth to investigate the efficacy of NPWT by reviewing current literatures. A database search for NPWT is performed in Queen Mary Hospital Department of O&T and a new approach of NPWT is adopted successfully.

Objectives

To review current literature on NPWT To adopt new approach of NPWT in Queen Mary HOspital Department O&T

Methodology

A database search was undertaken 300 literatures from 2005-2015 are identified. It is noted that there is lack of sufficient evidence to prove that the NPWT expedites wound healing. However, 20 literatures note that the NPWT increase wound bed vascularity and cell proliferation. 5 articles demonstrate NPWT as adjunct therapy for reduces edema and promote circulation of orthopaedic trauma wounds. 26 literatures demonstrate improving wound bed quality and size for diabetic foot ulcers and pressure ulcers. So the efficacy of NPWT is justify and has been widely used. Among the articles that have been reviewed, 1 literature from 2015 suggested that the combination of hypertonic saline dressing with NPWT is a new approach for treating some complicated wound (Fraccalvieri, Ruka, Morozzo, Scalise & Salomone, 2015).

Result

In Queen Mary Hospital Department of Orthopaedics & Traumatology, NPWT has also been used for managing chronic wounds like pressure ulcers, diabetic foot ulcers as well as some acute traumatic wounds. From March to December 2015, 25 patients are used the combination of hypertonic saline dressing with NPWT. 17 are pressure ulcers, 7 diabetic foot ulcers, 2 necrotising fasciitis wounds, 1 trauma injury wound. All

patients were noted with a significant improvement in wound bed condition and reduction in wound size. Patients' quality of care is enhanced as they experience a painless treatment with the use of NPWT instead of undergone anaesthesia in operation room.