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- Peningkatan Nutrisi Ibu Hamil di Indonesia: Pentingnya Peran Bidan di Desa dan Kader
- Produksi ASI Ibu dengan Intervensi *Acupressure Point for Lactation* dan Pijat Oksitosin
- Paket Dukungan terhadap *Breastfeeding Self Efficacy* dan Keberhasilan Menyusui pada Ibu Postpartum
- Efektivitas *Dzikralin* terhadap Penurunan Kecemasan dan Nyeri Persalinan Kula I Fase Aktif Ibu Primigravida
- Perubahan Keluhan Gejala Prahaid dengan Senam Aerobik
- Respons dan Koping Pasien Penderita Kanker Servik terhadap Efek Kemoterapi
- Pengalaman Orang Tua dalam Penggunaan Pengobatan Alternatif pada Anak yang Menderita Kanker di Jakarta
- GFR dan Kadar Timbal dalam Darah pada Pekerja POM Bensin Berdasarkan *β-mlal Gene Polymorphisms*
- Sistem Diagnosa Level Asma Menggunakan *Fuzzy Inference System*
- *Prototype* Bangku Ergonomis untuk Memperbaiki Posisi Duduk Siswa SMAN di Kabupaten Gresik
- Modifikasi Pompa ASI sebagai Terapi Luka Bertekanan Negatif untuk Mempercepat Penyembuhan Luka Diabetes
- Penggunaan Teknik *Z-Track Air Lock* untuk Menurunkan Nyeri pada Prosedur Injeksi Intra Muskular
- *Cognitive Support* Meningkatkan Kadar CD4 pada Pasien HIV di Kota Kediri
- Pengalaman Keputusan *Stroke Survivor* di Kota Semarang
- Teknik Perawatan Luka Modern dan Konvensional terhadap Kadar Interleukin 1 dan Interleukin 6 pada Pasien Luka Diabetik
- Intervensi *VAP Bundle* dalam Pencegahan *Ventilator Associated Pneumonia* (VAP) pada Pasien dengan Ventilasi Mekanis
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- Pembedayaan Kesehatan dan Ekonomi Perempuan Penderita HIV/AIDS Melalui *Life Skill Education*
- Model Manajemen Perawatan untuk Meningkatkan Kepatuhan Minum Obat dan Status Gizi Pasien TB Paru

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Modification of Breast Pump as a Negative Pressure Wound Therapy for Accelerating Wound Healing of Diabetic Ulcer

MODIFIKASI POMPA ASI SEBAGAI TERAPI LUKA BERTEKANAN NEGATIF UNTUK MEMPERCEPAT PENYEMBUHAN LUKA DIABETES

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Abstract

Introduction: Negative Pressure Wound Therapy (NPWT) is considered as the best treatment for accelerating wound healing, including diabetic ulcer. However, this device is still not available in Indonesia. Therefore, the purpose of this study were to make NPWT by using modification of breast pump, and to elucidate the effect of this device on acceleration of wound healing in diabetic ulcer. Method: NPWT was made by using digital breast pump. Wounds were divided into two groups; wound-treated by NPWT (experimental group) and wound-untreated by NPWT (control). The negative pressure used for this study was 85 mmHg. Rats were sacrificed on day 7, and wound samples and surrounding skin were stained with Hematoxylin and Eosyn. Inflammation, intensity of necrotic tissue, and wound closure were observed. Result: The device could deliver a negative pressure at a range of 85-140 mmHg. Wound size in the experimental group was smaller than in control group. Inflammation was also less in the experimental group than control group. Discussion: The modification of breast pump could be used as a negative pressure therapy for wounds, and has effect on reducing inflammation and necrotic tissue. Further study is needed to elucidate the effect of this device on human subject.

Keyword : diabetic, wound, breast, pump, negative, pressure, wound, healing,

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