

Efektivitas Campuran Povidone Iodine dan Madu dalam Penyembuhan Laserasi

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ABSTRAK

Pendahuluan. Pasien dengan luka laserasi pada daerah kaki umumnya mengalami kecelakaan lalu lintas. Berdasarkan mekanisme trauma, luka tersebut digolongkan menjadi luka kotor terkontaminasi. Pasien mendapat tindakan debridemen di kamar operasi sesuai dengan kondisi klinis kemudian dirawat di ruangan. Akan tetapi, keadaan klinis luka tersebut kurang optimal untuk proses penyembuhan sehingga memerlukan tindakan lanjut untuk menurunkan risiko infeksi pasca operasi. Madu sudah lama digunakan sebagai bahan perawatan luka bakar dan terinfeksi karena efek antimikrobal, angiogenik, dan anti-inflamasinya. Oleh karena itu, tujuan penelitian ini adalah mengetahui efektivitas campuran povidone iodine dan madu dalam penyembuhan laserasi.

Cara kerja. Pada uji klinis ini, digunakan 20 sampel yang dibagi menjadi dua kelompok secara acak. Satu grup diberikan campuran povidone-iodine dan madu, sedangkan grup lain diberikan povidone iodine saja. Proses penyembuhan luka diobservasi dengan menilai luas jaringan granulasi, jumlah cairan eksudat selama delapan hari perawatan, dan jumlah *colony forming unit (CFU)* pada hari pertama di Instalasi Gawat Darurat dan hari kedelapan perawatan. Hasil dianalisis dengan *Wilcoxon Sign Rank Test* dan *Mann Whitney Test*.

Hasil. Terdapat perbedaan bermakna antara kelompok I dan II dalam luas jaringan granulasi dan jumlah cairan eksudat. Sementara itu tidak terdapat perbedaan bermakna dalam jumlah *colony forming unit (CFU)* antara kedua grup.

Simpulan. Penggunaan campuran povidone iodine dengan madu lebih efektif dibandingkan dengan povidone iodine saja untuk proses penyembuhan luka laserasi.

Kata kunci : campuran povidone iodine 5% dengan madu murni, luas jaringan granulasi, jumlah cairan eksudat, *colony forming unit*

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Efficacy of Povidone Iodine and Honey Mixture in Laceration Recovery

ABSTRACT

Introduction. Patients with lacerations to feet are usually involved in motor vehicle accidents. Based on trauma mechanism, the wound may be classified as a dirty contaminated wound. Patients are taken to operating theater for debridement then followed by wound care at ward. Clinical conditions of such wounds frequently are not optimal for healing process and may require further treatment to decrease the risk for postoperative infection. Honey has been long used as a material for dressing of burn wounds and infected wounds because of its antimicrobial, angiogenetic, and anti-inflammatory properties. Thus the aim of the study is determine efficacy of povidone iodine mixed with honey in laceration recovery.

Materials and methods. This clinical study had twenty samples which were randomly assigned into two groups. One group have the wound treated using a mixture of 5% povidone iodine solution and pure honey, while the other group is treated using 5% povidone iodine only. The wound healing process was observed by evaluating granulation tissue, amount of exudates during the eight days of care, and the number of colony forming units (CFUs) from samples taken on admission in the ER and another taken at the eighth day of care. Statistical analysis is performed using the Wilcoxon Sign Rank Test and Mann Whitney Test.

Results. The analysis revealed a significant difference between the group I and group II in the amount of granulation and exudate production, while there is no significant difference in number of CFUs in both groups.

Conclusion. The mixture of 5% povidone iodine and pure honey are more effective compared to 5% povidone iodine only for the healing process of lacerations of the dorsal aspect of the right foot.

Key words: mixture of 5% povidone iodine with pure honey, amount of granulation, amount of exudates, colony forming units

Introduction

Injury to the feet can affect activity, health and emotional status of patients. Turchin reported that in patients with multiple organ injuries would demonstrate more state deteriorated significantly when accompanied by injury to the foot.¹

Within six months from January 2008 to June 2008 the number of injuries to the foot of a laceration injury with or without fractures who come to the emergency room (ER) Hasan Sadikin Hospital amounted to 177 cases. While in Edinburgh Scotland 9% of the total 760 cases of the same over a period of 6 years.¹ Lacerations on leg most often found in motorcyclists caused by motor vehicle accident. Based on trauma mechanism, the wound is classified into a dirty contaminated wound.^{1,2}

Such patients be stabilized in ER, debridement in the operating room (OR) according to the clinical condition. Wound care will be continued in ward. However, wound healing process are probably less than optimal because of the wound type. Thus it requires further action to decrease risk of infection postoperation.¹

Since 18th century in England and India, honey has long been used as a treatment for infected wounds. The use of pure honey, the one which is not diluted, is to treat a wide range of injuries including chronic infection with necrosis of tissue in the perineum (Fournier's gangrene).⁴ It has also been used for treatment of third-degree burns and infected wounds which shows decrease in the number of germs cultured, wet and necrotic tissue, exudate fluid, and foul-smelling.¹⁻¹²