

Effect of Acupuncture on ST36 Acute Stitches to Accessible Epithelialization Accuracies in Rats of Rats Infected of MRSA Bacteria

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ARTICLE INFO

Article history:

Received January 19, 2018
Revised February 28, 2018
Accepted February 28, 2018

Keywords:

Epithelialization,
MRSA infection,
ST36
Acupoint

ABSTRACT

Epithelialization is part of skin tissue regeneration to repair the damage. This process will be inhibited by the presence of bacterial infections, especially Methicillin resistant Staphylococcus aureus (MRSA). This study aims to determine the effect of stabbing acupuncture needles on ST36 acupoint on epithelialization on the healing process of MRSA infected wounds in the skin of wistar rats. Thirty six Wistar rats, 3 months old, are divided into 6 groups, 2 groups of negative control, 2 groups of positive control, 2 groups of treatment group (All are sacrificed on the fourth day and sixth day). Injury to the back skin of rats with a knife along the incised 2 cm and depth to subcutaneous. Wound of positive control groups infected by MRSA, wound in the treatment groups also infected MRSA and stabbing at ST36 acupoints. Each group are sacrificed to/for day 4 and 6, the skin tissue is fixed, made histological preparations, stained with HE. The measurement of the epithelial length using Optilab mounted on a light microscope. The data are analyzed by comparing the mean and SD. The epithelial length of the treatment group is higher than the positive control $\{(0,46\pm 0,19) \text{ vs } (0,21\pm 0,16); (0,63\pm 0,76) \text{ vs } (0,42\pm 0,301)\}$, being compared with the negative control is not much different. Stabbing acupuncture needles on ST36 acupoint accelerates epithelialization in wound healing of the skin MRSA-infected rat.

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I. Introduction

The science of acupuncture has been a medical science in China since 4000-5000 years ago. Many studies show ST36 acupuncture points are able to trigger the body's defense system. The development of acupuncture in Indonesia began in 1963, then on the instruction of the then minister of health (Prof. Dr. Satrio) established the research team of traditional medicine of eastern medicine and since then acupuncture practice was held officially in RS Cipto Mangunkusumo. The basic mechanisms of acupuncture stimulation are local reactions at acupuncture points by acupuncture stimulation (piezoelectric), arising inflammatory reactions and subsequent hypothalamic stimuli (endocrine reactions, neurochemical reactions, and autonomic nervous reactions) (1).

Skin injuries can be caused by various causes such as traumatic injury (mechanical, chemical, thermal, electrical) or may also be caused by blood vessel blockage (such as Buerger disease). The wound causes the loss of the skin structure to be limited to the epidermis or to the dermis even to the point of muscle. If the wound to the structure of the dermis or muscle will be accompanied by bleeding because the blood vessels are also affected. The wound becomes a port d'entry for microorganisms to enter the body, making the wound unsterile. The infection triggers the body's



DOI:

W: <http://ojs.stikesstrada.ac.id/index.php/JGRPH/>

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