

Giving Aloe Vera Gel (Aloe Vera) As Topical In Burns Treatment

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ABSTRACT

Aloe Vera (Aloe Vera) is a plant native to the African continent which is highly rated as a versatile herbal plant that is easy to find and is still used today as a traditional medicine. Aloe Vera (Aloe Vera) has very beneficial functions for the body, one of which is to accelerate wound healing with properties as anti-inflammatory, antiseptic, and increase tissue granulation. The research method used was observational with a cross-sectional survey analytic descriptive research type.

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INTRODUCTION

Burns are one of the incidents that often occur in society. It is also mentioned that burns are one of the most severe injuries among all other types of wounds. Approximately 2.5 million people experience burns in the United States each year from this group 200,000 patients require outpatient treatment and 100,000 patients are hospitalized and about 12,000 people die each year (Cindy D. Christie, Rismala Dewi, Sudung O. Pardede, 2018)

According to WHO 2018, burns are a global public health problem, which results in around 180,000 deaths each year, so it can be said that the prevalence of burns in the world is still relatively high. Most cases of burns occur in developing and low-to-middle income countries, and half of the cases occur in Southeast Asian countries, including Indonesia. It is estimated that there are 265,000 deaths that occur annually worldwide due to burns, occurring in Bangladesh, Columbia, Egypt and Pakistan, 28% occur in women aged around 25-60 years with burns and suffer from temporary disability and 18% suffer permanent disability. , whereas in Nepal burns are the second leading cause of injury, with 35% permanent disability.

Indonesia, the incidence of burns is still quite high, more than 195,000 deaths every year. Data on the incidence of burns from 2014-2016 showed that 68.8% occurred at the age of more than 18 years, mostly in the group who did not work 82.3% in Indonesia. The cause of most burns in Indonesia is caused by fire 73.7%, followed by LPG gas cylinders by 30.4%, electricity by 21%, and

hot water by 19.1%. The prevalence of burns in 2014 was 3.7% and has decreased by 2.1% compared to 2010 which was 3.5% (Nofiyanto & Nirmalasari, 2017).

In modern times, many people are looking for alternative treatments that can be used in the wound healing process. One of them is Aloe Vera (Aloe Vera), because aloe vera contains active substances such as saponins which are antiseptic, glucomannan as a fibroblast growth that stimulates the growth of fibroblasts. can help wound healing, tannins and flavonoids as antioxidants and stimulate the formation of glutathione and can be used as a prevention against wound infections, polyphenols act as a reduction in the risk of various diseases. This is evidenced by the results of several studies.

RESEARCH METHOD

This research design is a form of design used in conducting research procedures (Hidayat, 2012). The method used is literature study or systematic literature review. In this study, the method used to search for literature is to search for libraries or indexed electronic databases, namely Google Scholar by typing the keywords Aloe Vera, and Burns. This research was conducted using a literature study in March-October 2021. The population is all objects or subjects with certain characteristics to be studied. Not only the object or subject being studied, but all the characteristics or properties that have the subject or object (Hidayat, 2012). The population in this study were all journals related to Aloe Vera, Wounds, and Burns his research design is a form of design used in conducting research procedures (Hidayat, 2012).

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The sample is part of the population to be studied or part of the number of characteristics possessed by the population. In nursing research the sample criteria include inclusion criteria and exclusion criteria, where the criteria determine whether or not the sample can be used (Hidayat, 2012). In this study the sample used was 5 journals that met the inclusion criteria and those that did not have exclusion criteria.

RESEARCH RESULTS

Journal Discussion 1

The results of Atika Rahmi's research (2017), regarding the Comparison of the Effectiveness of Giving Silver Sulfadiazine With Aloe Vera Gel (Aloe Vera) 99% In Male White Rats (*Rattus Norvegicus* L.) Wistar strain as a Burn Treatment. This study used 33 samples of rats given a burn length of 2 cm with a depth of 0.1 cm. The intervention used aloe vera gel at a dose of 99%, and used silver sulfadiazine topically. Some samples were given aloe vera gel intervention with a dose of 99%, and other samples were given silver sulfadiazine. The intervention was given 1x1 for 14 days. Observations were made on days 1, 7 and 14. After being given intervention, the aloe vera gel group on day 1 showed wound size (2 cm), day 7 (1.86 cm), day 14 (0.42 cm). Silver sulfadiazine group, day 1 (2 cm), day 7 (1.80 cm), day 14 (0.62 cm).

The results showed that the treatment of burns using aloe vera gel experienced faster healing of burns because it contains saponins as antibacterial, tannins as antiseptics, flavonoids and polyphenols as antioxidants and beneficial for tissue regeneration. so that aloe vera gel is effective in healing burns and is well applied to humans as an alternative to burn treatment.

Journal Discussion 2

The results of Zainal Abidin's research (2020), regarding the Effectiveness of Giving Aloe Vera to Burn Patients in Yosowilangun Lumajang. This study used 30 female respondents as many as 18 people (60%), male as many as 12 people (40%). An intervention was given using aloe vera gel topically with a dose of 99%. The intervention was given for 5 minutes 3x1 for 2 weeks. Prior to the intervention using aloe vera gel, 18 respondents (60%) experienced first-degree burns and experienced pain responses on a scale of 4-6, 12 respondents (40%) experienced second-degree burns and experienced pain responses on a scale of 7-9 on burns. . After the intervention using aloe vera gel, there was a decrease in pain scale, namely 4-6 as many as 6 respondents (20%), and a scale of 1-3 as many as 24 respondents (80%), and overall, 30 respondents (100%) experienced burn healing, are in the proliferative phase.

The results showed that after treatment of burns using aloe vera gel was effective to accelerate the healing process and epithelialization of tissue in first and second degree burns and can reduce pain, because it is moist and cold. Aloe vera gel contains the active substance lupeol which can reduce inflammation and plant sterols can also contribute as an anti-inflammatory, help in reducing pain and and act as a natural analgesic.

Journal discussion 3

The results of Andri Nugraha's research (2016), concerning the Effect of Giving Aloe Vera to Burn Patients. This study used 9 journals reviewed with intervention using aloe vera gel at a dose of 10-70% as much as 3x1. The results show that burns experience a rapid healing process and epithelialization of skin tissue because aloe vera contains saponins as antibacterial, lupeol as anti-inflammatory, glucomannan and gibberellins to stimulate fibroblast growth and accelerate granulation for wound healing. Applied to patients with burns of degree I and degree II, but should not be used in people who are allergic to aloe vera because it causes skin irritation.

Journal Discussion 4

The results of Andriyanto's research (2016), regarding the Administration of Aloe Vera to the Wound Healing Process in Post Appendectomy Child Nursing Care. This study used 2 male respondents as many as 2 people (50.0%) and respondents aged 9-10 years. The intervention used aloe vera gel, with a dose of 99%. The intervention was given 3x1 for 3 days, topically. Before the intervention, using aloe vera gel An. V said lower right abdominal pain with a pain scale of 6, and it looks like a wound of approximately 3-4 cm with a little pus. an. J said lower right abdominal pain with a pain scale of 6, and seen a wound with a size of approximately 3-5 cm in good condition, no pus. After the intervention using aloe vera gel on An. V said the pain was reduced on a pain scale of 3, felt more comfortable, the wound was dry, clean, there was no pus, and there were still stitches. an. J said the pain was reduced on a pain scale of 4, felt more comfortable, the wound was dry, there were still a few lesions, there was no pus, there were still stitches.

The results showed that regular wound care with aloe vera gel was good for wound healing in children post appendectomy on the 3rd day. Because aloe vera gel contains beneficial substances such as saponins as antibacterial and functions to clean wounds, it is antiseptic, salicylate which can relieve pain and anti-inflammatory

Journal Discussion 5

The results of Komela Sari Yance's research (2020), regarding a Case Study of Wound Treatment with Aloe Vera Gel in Diabetic Foot ulcer patients. This study used 1 female respondent (50.0%) with the age of 55 years. The intervention used aloe vera gel, with a dose of 99%. The intervention was given once every 2 days for 3 weeks, topically. Before the diabetic wound intervention (45%), after the first intervention (40%), the second intervention (34%), and the third intervention (26%).

The results showed that treatment using aloe vera gel accelerated the healing of diabetic wounds. Aloe vera contains high water content, mannose 6-phosphate which can increase wound

contraction and collagen synthesis, acemanan can increase fibroblast proliferation which accelerates wound healing.

Based on the journals studied, the results of the 4th journal from Andryanto's research (2016), found facts that showed aloe vera was more effective in healing post-appendectomy wounds than burns. With a healing time of 3 days as much as 3 x 1 administration with a dose of 99% aloe vera gel with a wound size of 3-5 cm, compared to the results of the journal 1 research by Atika Rahmi (2017), with burns measuring 2 cm with a healing time of 2 weeks as much as 1x1 administration with the same dose of 99% aloe vera gel. Aloe vera (aloe vera) is more effective in post-appendectomy wound healing because appendicectomy wounds are sutured wounds so that they only need more time to grow and re-close compared to burns which have a lot of tissue and fluid loss so it takes longer to heal and close the wound properly.

Researchers assume that from the 5 journals reviewed, aloe vera is beneficial for wound healing because aloe vera contains active substances such as saponins that function as antimicrobials, glucomannans to help phobroblast growth, tannins as antiseptics. , flavonoids and polyphenols function as antioxidants and are useful for tissue regeneration.

CONCLUSION

It can be concluded that the administration of aloe vera gel as a topical is beneficial in healing Burns, Post Appendectomy Wounds and Diabetic Wounds.

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