Online-ISSN 2565-1409 Journal of Widya Medika Junior Vol 5. No 2 April 2023

LITERATURE STUDY: CORRELATION NUTRITION STATUS WITH WOUND HEALING

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DOI: https://doi.org/10.33508/jwmj.v5i2.3684

ABSTRACT

Background: *Perineal rupture is the most common complication of vaginal delivery. Similar to the wound healing process in general, the perineal wound healing process is influenced by nutritional factors. Nutritional factors that are known to be related to the wound healing process are protein levels which are reflected in albumin levels. In Indonesia, serum protein levels are not a variable that is routinely monitored in pregnant women. With a high prevalence of perineal wounds, measurement of serum albumin levels can be a means of early detection of maternal nutritional factors that can affect wound healing outcomes.*
Objective *of this study was to determine the relationship between serum albumin levels and the degree of post-salary perineal wound healing*
Methods*: The study was originally a prospective analytic observational study with a cross-sectional design. In response to the pandemic, the research design was changed to a literature study by searching for scientific publications during the last 5 years in Pubmed, Google Scholar, Sciencedirect, Researchgate, and Mendeley with the keywords Perineum, wounds, postpartum, albumin, nutrition and exclusion for literature studies. is inaccessible PDF and Publication not in the last 10 years .*
Results: *There were 10 literatures regarding wound healing and nutritional status of which 6 literatures were perineal wounds and 4 literatures were wounds related to malignancy. From the literature, it was concluded as many as 10 literatures showed that there was a relationship between nutritional status and wound healing.*
Conclusion: : *After reviewing the ten literatures, it can be concluded that there is a relationship between nutritional status and wound healing in mothers with perineal wounds.*
Keywords: Perineum, *wound*, postpartum, albumin, nutrition

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INTRODUCTION

Perineal rupture is a common complication of vaginal delivery. (1). A prospective study in Australia states that the prevalence of perineal rupture is around 85% and it is also known that there is a rupture in the anal sphincter around 20-41% (2). In addition, there is an increased risk of complications, namely fistula, incontinence and dyspareunia after perineal injury, especially third and fourth degree (3–5).

The perineal wound healing process is related to the puerperium. Like when the wound healing process in general can be caused by several factors. There are two factors that can influence, namely internal factors and external factors. On internal factors such as nutrition, personal hygiene, maternal condition, genetics, age, hemorrhage, hypovolemia, local edema factors, nutritional deficits, oxygen deficits, and excess activity. On external factors such as environment, traditions, knowledge, social aspects, economic aspects, handling officers, handling networks and drugs

The relationship between serum albumin levels and the wound healing process has been investigated. The length of the wound healing process is related to serum albumin levels in laparotomy patients (7). Serum albumin levels were also found to be increased in patients who recovered from ulcers compared to those who did not (8). In the presence of hypoalbunemia, intravenous administration of albumin can accelerate wound healing (9).

In Indonesia, serum protein levels are not a variable that must be monitored in childbirth. There is an increase in the prevalence of perineal wounds, when serum albumin levels are measured as a means of early detection of maternal nutritional factors that can affect wound healing outcomes.

METHOD

This research uses literature study method. Journals were obtained from *various sources*, *Plos ONE, PubMed, Google Scholar*, and *Student Online Journals*. Search journals using the keywords "Perineum, wounds, nutrition", Researchers chose 10 journals that matched the research that had been submitted and the existing requirements. This literature collection took place from October – December 2021.

RESULT

In 10 known research journals. There are similarities and differences in each literature. In the ten literatures, the aim of the study was to determine the relationship between nutritional status and perineal wound healing

Further similarities regarding the findings in each literature, it is known from the findings of ten literatures which show the results of differences in wound healing between groups with adequate nutritional status and poor nutritional status. In literature 3 and 10, testing the two variables with a correlation test. In literature 10, we found a relationship between nutritional patterns and wound healing, where the relationship was not found in literature 3.

The 10 literatures generally have an analytical observational design. In the aspect of nutritional status assessment, it was carried out by means of a retrospective recall of the food consumed by the respondents, although not all literature stated the complete contents of the questionnaire.

In ten known literatures, in general use different tests on data analysis techniques, except for literature 3 and 10 using correlation tests. This different test is used to answer whether or not there are differences in wound healing between groups with adequate nutritional status and poor nutritional status.

The research instruments used to assess wound healing were visual and recording methods. However, for the type of criteria only in literature 2 uses the REEDA score, although the categorical criteria for this score are not fully explained.

Tabel 1
Matriks Pemetaan Literatur

Nama Pengarang	Judul Artikel	Tahun
Chu-Cheng Chang, Yuan-Tzu Lan, Jeng-Kai Jiang, Shih-Ching Chang, Shung-Haur Yang,	Risk factors for delayed perineal wound healing	2019
Yuli Triyani, Ivon Diah Wittiarika, Gatut Hardianto	Factors Influencing the Process of Perineal Wound Healing in Postpartum Women in Serui Hospital, Papua	2021
Takatoshi Nakamura, Takeo Sato, Kazushige Hayakawa, Yoko Takayama,	Risk factors for perineal wound infection after abdominoperineal resection of advanced lower rectal cancer	2017
Septia Sari Dewi Aziz, Soemardini, Fajar Ari Nugroho	Hubungan Tingkat Konsumsi Protein, Zat Besi (Fe) dan Zinc (Zn) dengan Kondisi Penyembuhan Luka Perineum Derajat II pada Ibu Nifas	2016
Darmawati, Ia Sastra	Hubungan faktor-faktor yang mempengaruhi penyembuhan luka dengan lama penyembuhan luka perineum	2013
Elizabeth K. Nugent, John T. Hoffa, Feng Gao, L. Stewart Massad, Ashley Case	Mengetahui laju komplikasi luka di Divisi Ginekologi Wahington University	2011
Lijuan Shi, Qiao Gu, Fenghua Zhang	Mengetahui faktor resiko potensial infeksi luka	2021
Jenell Sheree Coleman, MD, MPH; Isabel Green, MD; Stacey Scheib, MD	Mengetahui faktor resiko potensial infeksi luka	2014
Nur Baiti Ratnasari	Hubungan Pola Konsumsi Protein Dengan Proses Penyembuhan Luka	2018

Michelle A. Soloff, MD, Maria V. Vargas, MD, Chapman Wei, BS, Ashley Ohnona, BA, Paul Tyan, MD, Alex Gu, MD, Bianca Georgakopoulos	Mengidentifikasi dampak malnutrisi	2021

DISCUSSION

It is known from the results of studies in 10 literatures that there are differences in wound healing between groups with adequate nutritional status and poor nutritional status.,

There are several factors that influence the perineal wound healing process, one of which is adequate nutrition that starts from protein. Serum albumin is the largest component of protein, about 50-60% in the body. Normal levels of albumin in the human body are 3-5 g/dl, while normal levels of protein are 6-8 g/dl. Therefore, serum albumin levels indicate total serum protein levels.

Protein is the material for the synthesis of collagen and connective tissue that is needed during the wound remodeling phase. Normal in the remodeling phase is about 4-5 days, but there is a possibility that it will lengthen and result in chronic wounds if the protein needs in the body are not fulfilled. Changes in the REEDA score are used to assess and determine the rate of wound healing from time to time.

CONCLUSION

The results of a literature review in ten research journals related to the relationship between albumin levels and post-partum perineal wound healing, it can be concluded that there are differences in wound healing between groups with adequate nutritional status and poor nutritional status,

The results of this study can be used to add to the discourse, especially in the field of obstetrics and gynecology.

ACKNOWLEDGEMENTS

The author would like to thank Oscar Indra Kusuma, dr., Sp. An as 1st supervisor and Sianty Dewi, dr., Sp.OG 2nd supervisors who have taken the time, energy and thought to assist the process of working on this research article. I would also like to express my gratitude to my family and friends who have always provided support so that it can be completed.

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