

**THE RELATIONSHIP BETWEEN BLOOD SUGAR LEVELS AND THE
PROCESS OF SURGICAL WOUND HEALING IN POST-DIGESTIVE
SURGERY PATIENTS WITH COMORBID DIABETES MELLITUS
AT RSUD KARSA HUSADA BATU**

Silvia Wulandari¹, Sulastyawati²

Program Studi Sarjana Terapan Keperawatan Malang, Jurusan keperawatan
Poltekkes Kemenkes Malang

Email : silviawulandari180@gmail.com

ABSTRACT

*Diabetes Mellitus (DM) is a comorbid condition that can affect the postoperative wound healing process. High blood glucose levels can impair wound healing by disrupting collagen synthesis, angiogenesis, and phagocytosis. This study aims to analyze the relationship between blood glucose levels and the process of surgical wound healing in post-digestive surgery patients with DM. This research used a quantitative correlational design with a cross-sectional approach. The study sample consisted of 47 post-digestive surgery patients with DM at Karsa Husada General Hospital, Batu. Blood glucose level data was measured using a glucometer, while wound healing was assessed using the REEDA scale (Redness, Edema, Ecchymosis, Discharge, Approximation). Data analysis used Spearman's Rank correlation test. **Results:** The study showed that the average blood glucose level of respondents was 166.98 mg/dL, which falls into the moderate category. The average wound healing score was 1.26, indicating moderate wound healing. The correlation test revealed a significant relationship between blood glucose levels and the process of wound healing ($r = 0.648$), with a strong correlation interpretation. **Conclusion:** There is a positive and strong relationship between blood glucose levels and the process of surgical wound healing in post-digestive surgery patients with DM. The higher the blood glucose level, the more impaired the wound healing process, resulting in a longer time required for wound recovery. This study emphasizes the importance of blood glucose control to accelerate postoperative wound healing.*

Keywords: Blood glucose level, wound healing process, diabetes mellitus, digestive surgery, REEDA scale.