

ABSTRAK

STUDI KASUS : PERBEDAAN PENGUKURAN LUAS LUKA ULKUS MELALUI PERKIRAAN DAN PENCITRAAN DIGITAL (IMAGE J) PADA PASIEEN DIABETES MELLITUS DI RSUD KARDINAH TEGAL

Nur Indah Ramadani¹, Benny Arief Sulistyanto², Muhamad Subur³
1,2 Program Studi Profesi Ners, Fakultas Ilmu Kesehatan
Universitas Muhammadiyah Pekajangan Pekalongan
3 RSUD KardinahTegal

Pendahuluan : Diabetes mellitus merupakan penyakit metabolik yang ditandai dengan tingginya kadar glukosa dalam darah akibat kelainan skeresi insulin, kerja insulin atau keduanya. Ulkus adalah salah satu komplikasi utama diabetes mellitus. Pengukuran area luka merupakan aspek yang penting dalam perawatan ulkus kaki diabetik. Pengukuran luka dengan pencitraan digital ini diharapkan dapat membantu dalam pemantauan dan penanganan luka. Penelitian ini bertujuan untuk mengetahui penentuan luas luka diabetes dengan Image J dibandingkan dengan perkiraan individu.

Metode : Penelitian ini mengakses database Pubmed dan Google Garuda untuk artikel berbahasa Indonesia. Pencarian dilakukan dengan mengkombinasi kata kunci “Ulkus Diabetes”, “Pengukuran Luas Luka”, “Diabetic Wound”, “Foot Ulcer”, “Digital Imaging”, “Image-J”, “Wound Assesment”, “Wound Evaluation”. Partisipan pada studi ini adalah pasien dengan ulkus diabetes.

Hasil : Perkiraan melalui foto didapatkan hasil luas area luka kuning (slough) 26% ($\pm$ 9,62) dan luka merah (ploriferasi) sebesar 74% ($\pm$ 9,62). Sedangkan menggunakan Image J diperoleh hasil luas area luka kuning (slough) 17,6% ($\pm$ 3,52) dan luka merah (ploriferasi) sebesar 82,6% ($\pm$ 3,61).

Simpulan : Penggunaan ImageJ lebih reliabel untuk menentukan luas luka. Setiap metode memiliki kelebihan dan kekurangannya masing-masing.

Kata kunci : Ulkus, Diabetes Mellitus, Pengukuran Luas Luka, Image-J

ABSTRACT

CASE STUDY: DIFFERENCES IN MEASUREMENT OF ULCER AREA THROUGH ESTIMATION AND DIGITAL IMAGING (IMAGE J) IN DIABETES MELLITUS PATIENTS AT KARDINAH HOSPITAL TEGAL

Nur Indah Ramadani¹, Benny Arief Sulistyanto², Muhamad Subur³

1,2 Internship Program in Nursing, Faculty of Health Sciences

University of Muhammadiyah Pekajangan Pekalongan

3 Kardinah Hospital, Tegal

Introduction: Diabetes mellitus is a metabolic disease characterized by high blood glucose levels due to abnormalities in insulin secretion, insulin action, or both. Ulcers are one of the main complications of diabetes mellitus. Measuring the wound area is a crucial aspect of diabetic foot ulcer care. Digital imaging wound measurement is expected to assist in the monitoring and treatment of wounds. This study aimed to determine the area of diabetic wounds using Image J compared to individual estimation.

Method: This study accessed the PubMed and Google Garuda databases for Indonesian language articles. The search was conducted by combining keywords "Diabetic Ulcers," "Wound Area Measurement," "Diabetic Wound," "Foot Ulcer," "Digital Imaging," "Image-J," "Wound Assessment," and "Wound Evaluation." Participants in this study were patients with diabetic ulcers.

Results: Estimation from photos showed the yellow wound area (slough) was 26% (± 9.62), and the red wound area (proliferation) was 74% (± 9.62). Using Image J, the yellow wound area (slough) was found to be 17.6% (± 3.52), and the red wound area (proliferation) was 82.6% (± 3.61).

Conclusion: The use of ImageJ is more reliable for determining wound area. Each method has its advantages and disadvantages.

Keywords: Ulcer, Diabetes Mellitus, Wound Area Measurement, Image-J