Correlation of spectral doppler usg of limb pedis score on diabetic foot ulcers

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Abstrak

Introduction: Diabetic foot ulcer is one of the most severe complications in a patient with diabetes mellitus because it will lead to with amputation, which results in disability and death. Doppler ultrasound is an easily available and non-invasive modality for evaluating lower limb arteries and can detect the severity of blood flow disorders or peripheral arterial disease (PAD). WHO recommends the classification of perfusion, extent/size, depth/tissue loss, infection, and sensation (PEDIS) as a tool for establishing the diagnosis and helping determine the management of diabetic foot. This study aims to see the correlation of PEDIS scores in assessing impaired lower limb arterial flow with Doppler ultrasound in patients with diabetic foot ulcers. Method: This was a cross-sectional study with subjects who has diabetic foot ulcer treated in the Division of Vascular and Endovascular Surgery, Cipto Mangunkusumo Hospital, Jakarta, Indonesia. The data of PEDIS scores and spectral ultrasound in the femoral artery, popliteal artery, dorsalis pedis artery, and posterior tibial artery were taken. Results: As many as 81 subjects participated in this study, with 52 people (64%) were male, 29 people (36%) were female, and an average age of 59.8 ± 10.5 years. Pedis cut-off scores were obtained using ROC (receiver operating characteristic) curves, with popliteal arteries scores of >10, dorsalis pedis arteries, and posterior tibial arteries scores of >8 had the best values as diagnostic tools compared to USG as reference standards.