

Effectiveness of Balloon Angioplasty and Stent Angioplasty: Wound Healing in Critically Limb Ischemic

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Abstract : Introduction: Critical limb ischemia (CLI) is a vascular disease that has a significant amputation and mortality risk with diabetes mellitus, the most significant risk factor in CLI, is very common among Indonesian. Endovascular intervention (EVI) is preferred in treating CLI because it is noninvasive and effective. Balloon angioplasty and stent angioplasty are the most common method of EVI in Indonesia. This study aims to compare the effectiveness of balloon angioplasty and stent angioplasty on wound healing in CLI. Method: A cross-sectional study enrolled 90 subjects of CLI who underwent endovascular intervention using balloon angioplasty and stent angioplasty from January 2013 to July 2017 in dr. Cipto Mangunkusumo General Hospital, Jakarta. The wound healing period between balloon angioplasty dan stent angioplasty was analyzed using unpaired T-test with $p < 0,05$ considered as statistically significant. Data of intervention method wound healing period, and subjects characteristic data (age, amputation, BMI, smoking habit, DM, occlusion site, and blood profile) were obtained. Result: The wound healing period in balloon angioplasty and stent angioplasty distributed normally. Mean value of wound healing period in balloon angioplasty and stent angioplasty are $84,8 \pm 2,423$ and $59,93 \pm 2,423$ days with a mean difference of 25 days. The difference in wound healing period in both groups is statically significant ($p < 0,05$). The amputation event in balloon angioplasty and stent angioplasty is 22 and 16 event with no difference statistically. Conclusion: Stent angioplasty is a better method than balloon angioplasty for wound healing in patients with CLI.

Keywords : critical limb ischemia, endovascular intervention, wound healing, angioplasty

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