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# Comparison of wound healing potential of papaya peel dressing with povidone-iodine dressing on diabetic foot ulcers

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A diabetic foot ulcer is a non-healing or poorly healing full-thickness wound, through the dermis under the ankle in an individual with diabetes mellitus. There are approximately 10 million of diabetic ulcers in the world that require treatment every year. Diabetic wounds may never heal or may take years to heal. These wounds cause severe emotional and physical stress, pain and create a significant financial burden on patients and the health care system. Unripe papaya peel dressings are also used for chronic wounds in clinical practice these days. The present study was carried out to compare the efficacy and safety of the papaya peel dressing (PPD) with povidone-iodine dressing (PID) for Wagner type II diabetic foot ulcers.

Sixty two patients with informed consent were enrolled in the study, whose ulcers had been diagnosed as chronic diabetic foot ulcers and were prescribed either PPD or PID by the surgeon concerned. Thirty one patients were treated with PID while the remaining 31 patients were treated with PPD. The efficacy parameters were the duration of time required to induce the development of healthy granulation tissues and the requirement of surgical debridement during the treatment.

Time required to induce development of healthy granulation tissues was 14.61 ± 1.4 days in the group treated daily with PID and 7.74 ± 1.9 days in the group treated daily with PPD ($P = 0.0001$). The number of patients who required surgical wound debridement during treatment in the PID group was 15 and in PPD group was 2. Efficacy parameters significantly improved in the PPD group compared to the PID group. The frequency of adverse effects like local irritation and itching were similar in both groups and the difference was not statistically significant ($P = 0.452$). Pain level was also compared in both groups and there was no significant difference noted ($P = 0.728$). No complications like infections occurred in either group.

Taken together, the PPD is more efficacious and equally safe compared to the PID in treating patients with diabetic foot ulcers. Moreover, the cost-effectiveness and the availability make PPD a better treatment option for diabetic foot ulcers.