

Local therapy using wound dressing with ionic silver and alginate helps in diabetic foot ulcers

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Aim: We evaluated retrospectively the effectiveness of local therapy using wound dressing with ionic silver and alginate in patients with diabetic foot ulcers. **Methods:** 63 patients (4 patients Type 1 diabetes, 16 women, mean age 59.7 ± 10.6 year, mean duration of diabetes 13.2 ± 8.5 years, mean HbA1c value $6.7 \pm 2.0\%$ /IFCC, mean ulcer area 10.6 ± 13.6 cm²) were treated with two-layer wound dressing with alginate and ionic silver (= "silver group"). We assessed the change of ulcer area. The mean treatment period was 151.5 days (assessed either as time to healing, to treatment switch, or 180 days maximum). In further step we compared this treatment group with a group of diabetic foot patients treated with a mix of wound dressings. **Results:** The diabetic foot ulcers were in 57.1% of neuroischemic and in 42.9% of neuropathic etiology. According to the Wagner-Meggitt classification 73% ulcers were of grade 2, 17.5% of grade 1 and 9.5% of grade 3. Clinically manifested infection (erythema, phlegmon, malodorous exudate) was present in 55.5%, a positive swab in the case of wound healing stagnation was found in 28.6%. During the reported period we observed a statistically significant mean reduction in ulcer area ($68 \pm 54\%$), with a median of 91.7% ($p < 0.001$). In 14 patients ulcers healed completely. We have seen no significant difference in healing between ulcers of neuroischemic and neuropathic etiology. We compared this "silver group" with a group of diabetic foot patients that we followed in another study (with very similar characteristic - 176 patients, mean age 63.2 ± 11.9 year, mean duration of diabetes 14.5 ± 9.1 years, mean HbA1c value $7.1 \pm 2.1\%$ /IFCC, mean ulcer area was 5.1 ± 8.8 cm² - this area was only one half of the ulcer area in the "silver group"). This group was observed for 164.4 ± 27.5 days and treated with various kinds of wound dressings. The ulcer area reduction during the observation was $58\% \pm 42\%$ with a median of 72.1%. **Conclusions:** The use of modern wound dressing with alginate and ionic silver significantly helps to the ulcer healing in patients with diabetic foot syndrome. The advantage of these materials is an antimicrobial effect, the extended time between re-dressings and the good tolerability. In comparison with patients treated with a mix of wound dressings the ionic silver dressing with alginate seems to be more efficient in the treatment of the diabetic foot syndrome.