

MAGGOT DEBRIDEMENT THERAPY IN PATIENTS WITH DIABETIC FOOT

Robert Bém¹, Alexandra Jirkovská¹, Karel Novotný², Vladimíra Fejfarová¹,
Michal Dubský¹, Ludmila Řezaninová¹, Petra Fexová¹

¹*Institute for Clinical and Experimental medicine, Prague, Czech Republic,* ²*Motol University Hospital, Prague, Czech Republic*

Aim: To assess the clinical and microbiological efficacy of maggot debridement therapy (MDT) in the management of diabetic foot ulcers.

Methods: Between January 2005 and December 2007, patients with infected wounds with signs of gangrenous or necrotic tissue who seemed suited for MDT were enrolled in the present study. MDT was indicated in patients with risk of tissue damage if sharp surgical debridement was performed and in patients with Methicillin-resistant *Staphylococcus aureus* (MRSA) infection of the foot ulcer. 56 subjects with diabetic foot ulcers were assigned to MDT. Sterile free-range larvae of the green bottle fly *Lucilia Sericata* were applied to the ulcers. The effect of the therapy was assessed by physician after MDT – improvement, no change or impairment. Impairment was classified either as impaired local finding or as a major amputation in 3 months after MDT. Swabs or tissue samples were taken from deep structures of the wound after debridement. Specimens for culture were obtained immediately before and after MDT; control specimens were taken 10 (±3) days after ending of MDT. MRSA was identified according to positive test for mec gene.

Results: The mean duration of MDT was 3.15 days (range 3-5 days); 5-10 larvae per cm². Improvement of healing was seen in 39 (69.6%) patients, no change in 11 (19.9%) patients and impairment of healing in 4 (7%) patients. Results were not valid in 2 (3.5%) patients due to the death of the larvae. MRSA cultivation was negative in 9 of the 13 (69%) ulcers immediately after MDT ($p < 0.001$) and in 8 of the 13 ulcers (61.5%) after 10 days (±3) from ending of MDT ($p < 0.001$). No adverse events of MDT were recorded.

Conclusions/discussion: Maggot debridement therapy has been shown to be a safe and effective method for debridement and elimination of MRSA infection in patients with diabetic foot ulcers.

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