

## Leprosy

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### **Exposure to pulsed magnetic fields in the treatment of plantar ulcers in leprosy patients--a pilot, randomized, double-blind, controlled clinical trial.**

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A pilot, randomized, double-blind, controlled clinical trial to study the effect of exposure to pulsed magnetic fields (PMF) on the rate of healing of plantar ulcers in leprosy patients was undertaken. Twenty patients were randomly allocated to receive standard wound-care treatment (controls) and 20 others received standard treatment plus exposure to PMF (sinusoidal form, 0.95 to 1.05 Hz, amplitude +/- 2400 nano Teslas) (study group) for four weeks. Assessment of the outcome of treatment was based on the volume of ulcers, calculated from the maximal length, breadth and depth of the ulcer recorded on the day of admission, at one and two weeks and at the end of treatment. The analysis of the results was based on 15 control patients and 18 PMF patients after deletion of four patients due to irregularity in attendance and three others on account of suspected malignancy of the ulcers. In the control group, the geometric mean volumes of the ulcers were 2843 and 1478 cu mm on the day of admission and at the end of the treatment ( $P = 0.03$ ); the corresponding values in the PMF group were 2428 and 337 cu mm, respectively ( $P < 0.001$ ). A decrease in the volume of 40% or more was observed in 53% of control patients and 89% of PMF patients ( $P = 0.02$ ); a decrease of 80% or more was observed in none of the controls and in 33% of PMF patients. These findings strongly suggest that exposure to PMF causes a significantly more rapid healing of plantar ulcers in leprosy patients.