Topical Phenytoin treatment of Stage II Decubitus Ulcers in the Elderly.

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Abstract:

Objective: To compare the healing of stage II decubitus ulcers with topically applied phenytoin sodium with two other standard topical treatment procedures in a long-term care setting; and to assess the extent of systemic absorption after topical application in the phenytoin group.

METHODS: Forty-seven nursing home patients with stage II decubitus ulcers were chosen for this study. The patients were matched for age, gender, and size and severity of wounds, and randomly assigned to each treatment group. Clinical assessment of decubitus ulcers was performed at the beginning of treatment and at each dressing change. Ulcers were examined for the presence of healthy granulation tissue, reduction in surface dimensions, and time to healing. Two phenytoin sodium plasma concentrations were to be obtained on all patients in the phenytoin group.

RESULTS: Topical phenytoin therapy resulted in a shorter time to complete healing and formation of granulation tissue when compared with DuoDerm dressings or triple antibiotic ointment applications (p £ 0.05). The mean ± SD time to healing in the phenytoin group was 35.3 ± 14.3 days compared with 51.8 ± 19.6 and 53.8 ± 8.5 days for the DuoDerm and triple antibiotic ointment groups, respectively. Healthy granulation tissue in the phenytoin group appeared within two to seven days in all subjects. Patients in the standard treatment groups required six to 21 days to produce new granulation tissue. Serum phenytoin sodium concentrations were nondetectable. No patient withdrew from the study secondary to adverse treatment effects.

CONCLUSIONS: Both the phenytoin and standard treatment groups showed progress over the study period. However, the phenytoin group demonstrated more rapid results in all aspects of ulcer healing.

KEY WORDS: decubitis ulcers, topical phenytoin.

Comments:

Strengths/uniqueness: The patients were randomized into three study-arms, although the randomization process is not described. Measurements were done to standardize the stages of ulceration. The investigators also looked at the systemic effects of topically applied phenytoin.
Weaknesses: The strength of evidence would have been greater with a placebo control. The presence of a full-time treatment nurse probably influenced the treatment; this makes it less applicable to clinical situations. The costs of the different treatments were not compared. The study population are healthier elderly patients and the results might conceivably differ in debilitated patients.

Relevance to Palliative Care: Decubitus ulcers occur commonly in the Palliative Care population and faster, less complicated healing methods will be very helpful. A study to assess the efficacy of topical phenytoin in the Palliative

Care population with decubitus ulcers will be useful.