

Executive summary

Background

Chronic ulcers in the elderly and frail elderly result in pain and decreased quality of life for the patients. Treatment requires considerable health care resources and is associated with high costs.

Chronic ulcers such as leg ulcers, diabetic foot ulcers and pressure ulcers, are most common in the elderly and their prevalence increases with age.

Today the elderly population, 65 years of age or older, represents one fifth of the Swedish population and is rapidly growing.

Objective

The aim of this systematic review is to assess the scientific evidence for interventions designed to prevent or treat chronic ulcers in the elderly, including how the interventions are organised. This report does not cover the prevention of pressure ulcers due to the ongoing project by EPUAP/NPUAP (European and North American Pressure Ulcer Advisory Panels).

Method

A systematic review was prepared using the standard methods of the Swedish Council on Health Technology Assessment (SBU). The review focuses on the treatment and prevention of chronic leg ulcers, diabetic foot ulcers and treatment of pressure ulcers. Investigated interventions include topical treatment, compression therapy, surgical treatment as well as the organisation of wound care. Outcomes were healing, ulcer area reduction, ulcer recurrence and quality of life. The evaluation included medical, nursing, economic and ethical aspects.

Prospective controlled trials were identified using the following databases: PubMed, EMBASE, Cochrane library and Cinahl (between 1987 and August 2013). In addition, reference lists and books were used to identify further studies. Studies were considered eligible if the population was of mean/median age ≥ 70 years (pressure ulcers and leg ulcers) or mean/median

age ≥ 65 years (diabetic foot ulcers). A total of 3 111 abstracts were identified, of which 96 studies were found to fulfil the inclusion criteria.

The methodological quality of these studies were assessed and scored as low, moderate, or high risk of bias. Only studies with moderate or low risk of bias were included in the further analyses and meta-analysis. After 73 studies were excluded due to high risk of bias 23 remained for the final analysis¹.

Conclusions

- ▶ The scientific evidence for the prevention and treatment of chronic ulcers in the elderly is limited. For the majority of interventions, more research of good scientific quality is required. The elderly population often has co-morbidities and multiple medications, which can affect ulcer healing and introduce bias into the studies.
- ▶ It is unclear to what extent different methods for the treatment and prevention of chronic ulcers are currently used in clinical praxis in Sweden. Based on this review the following conclusions can be drawn:
 - Surgery of varicose veins can reduce the recurrence of venous leg ulcers in the elderly.
 - Dressings containing calcium alginate may lead to shorter healing time of pressure ulcers in the elderly. Healing effects of other dressings in this specific age group are insufficiently studied.

¹ *Leg ulcer* (6 studies): surgery (3), larval therapy (1), ultra sound (1) and dressing-zink (1). *Diabetic foot ulcer* (4 studies): prevention (2 studies, orthosis or exercise in combination with education) and treatment (HBOT (1) and dalteparin (1)). *Pressure ulcer* (9 studies): Dressings (5), nerve growth factor (1), monochromatic light (2) and laser therapy (1). **Organization:** 4 studies.

- ▶ Substantial gaps in our knowledge exist regarding how the organisation of wound management (wound healing centres, education and training, communication, coordination and continuity) impacts both the healing and recurrence of chronic ulcers.
- ▶ Varicose vein surgery as causal treatment of venous leg ulcers can be cost effective.

Knowledge gaps

The efficacy of the methods scrutinized in this report were often limited. More and better designed studies of chronic ulcers in the elderly should enable us to bridge the gaps in our knowledge, allowing us to alleviate suffering for this growing group of patients and to control health care costs in the future. This will become increasingly important as the prevalence of chronic ulcers increases with the age of the Swedish population.

Ethical aspects

The gaps in our knowledge lead to serious ethical problems, as chronic ulcers significantly reduce the quality of life of the elderly while the healthcare system struggles to provide them with timely and effective care in the absence of evidence to guide them. In addition, the lack of evidence makes it difficult to establish effective treatment guidelines, leading to local variations in the treatment and prevention of chronic ulcers, and ultimately to an unacceptable inequality in treatment standards.

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