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Reconstructive surgery for treating pressure ulcers

Review

Intervention

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Abstract

Background

The management of pressure ulcers involves several interventions ranging from pressure-relieving measures such as repositioning, to treatments that can include reconstructive surgery. Such surgery may be considered for recalcitrant wounds when full thickness skin loss arises and deeper structures such as muscle fascia and even bone are exposed. The surgery commonly involves wound debridement followed by the addition of new tissue into the wound. Whilst reconstructive surgery is an accepted means of ulcer management, the benefits and harms of surgery compared with non-surgical treatments, or alternative surgical approaches are not clear.

Objectives

To assess the effects of reconstructive surgery for healing pressure ulcers (stage II or above), comparing surgery with no surgery or comparing alternative forms of surgery in any care setting.

Search methods

We searched the following electronic databases to identify reports of relevant randomised clinical trials (searched 26 September 2016): the Cochrane Wounds Specialised Register, CENTRAL, MEDLINE, Embase, and CINAHL. We also searched three clinical trials registers and reference lists of relevant systematic reviews, meta-analyses and health technology assessment reports.

Selection criteria

Published or unpublished randomised controlled trials that assessed reconstructive surgery in the treatment of pressure ulcers.

Data collection and analysis

Two review authors independently performed study selection. We planned that two review authors would also assess the risk of bias and extract study data.

Main results

We did not identify any studies that met the review eligibility criteria nor any registered studies investigating the role of reconstructive surgery in the management of pressure ulcers.

Authors' conclusions

Currently there is no randomised evidence that supports or refutes the role of reconstructive surgery in pressure ulcer management. This is a priority area and there is a need to explore this intervention with more rigorous and robust research.

Plain language summary

English

Reconstructive surgery for treating pressure ulcers

Review question

We aimed to review the evidence as to whether reconstructive surgery is an effective treatment for healing pressure ulcers. We were unable to find any randomised controlled trials investigating this question.

Background

Pressure ulcers are areas of skin and tissue damage that result largely from people remaining in the same position for long periods of time. When parts of the body, especially those that have less fat such as the lower back and heel, have constant external pressure applied (for example sitting on the same area of the body without changing position) this restricts blood flow to the skin and underlying tissues which can lead them to break down. People at risk of developing pressure ulcers include the elderly and those with mobility problems such as wheelchair users and long-term hospital patients. Pressure ulcers can be classified using a staging system where stage I ulcers still have

intact skin, stage II ulcers involve partial skin and tissue loss and are often shallow wounds and stage III and IV ulcers are open wounds with deeper tissue damage. Pressure ulcers are serious wounds that are costly to treat, so care is focused on their prevention. When ulcers do occur, treatment options include wound dressings, and antibiotics and antiseptics. Reconstructive surgery is often reserved for deep or hard to heal pressure ulcers, or both. There are different types of surgeries that can be conducted: most involve removal of dead tissue from the wound and then use of fat, muscle and/or skin from other parts of the patient's body to fill the wound cavity.

Study Characteristics

In September 2016 we searched for randomised controlled trials studying the use of surgery for treating pressure ulcers. However, whilst reconstructive surgery for pressure ulcers is practised widely, we found no randomised controlled trials that investigated the potential benefits and harms associated with surgery or that could guide the optimal choice of surgical technique. Many studies excluded from this review reported data from groups of people undergoing reconstructive surgery without a comparison of outcomes for similar groups of people who did not have surgery, or who had different types of surgery. This means that it is not possible to weigh up the benefits and harms of surgery, or different surgical techniques.

Key results

We found no randomised controlled trials investigating reconstructive surgery for pressure ulcers.

Certainty of the evidence

The benefits and harms of reconstructive surgery for the treatment of pressure ulcers are uncertain and more rigorous research in this area is needed, especially as this question has been prioritised by patients, carers and health professionals.

This plain language summary is up to date as of September 2016.

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