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Lee SH, Grant R, Kennedy C, Kilbride L. Positioning and spinal bracing for pain relief in metastatic spinal cord compression in adults. *Cochrane Database of Systematic Reviews* 2015, Issue 9. Art. No.: CD007609. DOI: 10.1002/14651858.CD007609.pub3.

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[Intervention Review]

Positioning and spinal bracing for pain relief in metastatic spinal cord compression in adults

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Editorial group: Cochrane Pain, Palliative and Supportive Care Group. **Publication status and date:** Stable (no update expected for reasons given in 'What's new'), published in Issue 9, 2015.

Citation: Lee SH, Grant R, Kennedy C, Kilbride L. Positioning and spinal bracing for pain relief in metastatic spinal cord compression in adults. *Cochrane Database of Systematic Reviews* 2015, Issue 9. Art. No.: CD007609. DOI: 10.1002/14651858.CD007609.pub3.

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ABSTRACT

Background

This is an updated version of the original Cochrane review published in Issue 3 (Lee 2012) on patient positioning (mobilisation) and bracing for pain relief and spinal stability in adults with metastatic spinal cord compression.

Many patients with metastatic spinal cord compression (MSCC) have spinal instability, but their clinician has determined that due to their advanced disease they are unsuitable for surgical internal fixation. Mobilising may be hazardous in the presence of spinal instability as further vertebral collapse can occur. Current guidance on positioning (whether a patient should be managed with bed rest or allowed to mobilise) and whether spinal bracing is helpful, is contradictory.

Objectives

To investigate the correct positioning and examine the effects of spinal bracing to relieve pain or to prevent further vertebral collapse in patients with MSCC.

Search methods

For this update, we searched for relevant studies from February 2012 to 31 March 2015. We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE and MEDLINE In Process, EMBASE, AMED, CINAHL, TRIP, SIGN, NICE, UK Clinical Research Network, National Guideline Clearinghouse and PEDro database. We also searched the metaRegister of Controlled Trials (mRCT), ClinicalTrials.gov, UK Clinical Trials Gateway (UKCTG), WHO International Clinical Trials Registry Platform (ICTRP) and Australia New Zealand Clinical Trials Registry (ANZCTR).

For the original version, we searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, CINAHL, CANCERLIT, NICE, SIGN, AMED, TRIP, National Guideline Clearinghouse, and PEDro database, in February 2012.

Selection criteria

We selected randomised controlled trials (RCTs) of adults with MSCC of interventions on positioning (mobilisation) and bracing.

Data collection and analysis

Two review authors independently assessed each possible study for inclusion and quality.



Main results

For the original version of the review, we screened 1611 potentially relevant studies. No studies met the inclusion criteria. Many papers identified the importance of mobilisation, but no RCTs of bed rest versus mobilisation have been undertaken. We identified no RCTs of bracing in MSCC.

For this update, we identified 347 potential titles. We screened 300 titles and abstracts after removal of duplicates. We did not identify any additional studies for inclusion.

Authors' conclusions

Since publication of the original version of this review, no new studies were found and our conclusions remain unchanged.

There is a lack of evidence-based guidance around how to correctly position and when to mobilise patients with MSCC or if spinal bracing is an effective technique for reducing pain or improving quality of life. RCTs are required in this important area.

PLAIN LANGUAGE SUMMARY

Position and spinal bracing for pain relief in adults with metastatic spinal cord compression

Metastatic spinal cord compression (MSCC) is a serious complication of advanced cancer that can cause pain and mobility (movement) problems as well as paralysis. For many patients, a diagnosis of MSCC indicates the final stages of their illness. The spread of cancer to the spinal column can make walking unsafe. However, staying in bed risks deep vein thrombosis or pressure sores. Supporting the spine with spinal bracing (neck, thoracic spine, or lumbar support) may prevent further spinal collapse, but may be uncomfortable or ineffective.

Managing this condition is challenging for healthcare professionals. Some existing guidelines suggest bed rest (avoiding movement) and the use of spinal braces. However, positioning (for example lying flat, sitting up, standing or walking) and the use of spinal braces needs to be balanced against the patient's wishes, ensuring their comfort and individual preferences. If the spine is unstable, movement may cause more pain and risk further spinal cord or nerve root damage. Spinal bracing may be supportive and reduce pain and risk of collapse. However, spinal bracing may not prevent further collapse and spinal cord damage, and may be uncomfortable. If life expectancy is short, then a palliative care approach focusing on patient preferences and priorities is appropriate.

This review update attempted to find the existing evidence on positioning and spinal bracing for adults with MSCC. We ran updated searches in March 2015. We found no randomised clinical trials comparing positioning (bed rest versus mobilisation), or spinal bracing to no bracing, for pain relief. In the absence of clear evidence, healthcare professionals and patients need to discuss the options to decide what is best for the individual patient.

For this update, no new studies were found and our conclusions remain unchanged. There is a need for randomised controlled clinical trials to find out which treatment is most effective.