Review: Bed rest does not prevent cervical or lumbar puncture headaches

Thoennissen J, Herkner H, Lang W, et al. **Does bed rest after cervical or lumbar puncture prevent headache? A systematic review and meta-analysis.** CMAJ. 2001 Nov 13;165:1311-6.

QUESTION

In patients having cervical or lumbar puncture, is longer bed rest more effective than immediate mobilization or short bed rest in preventing headache?

DATA SOURCES

Studies were identified by searching MEDLINE (1966 to May 2001), EMBASE/Excerpta Medica (1988 to March 2001), Pascal Biomed (1996 to February 2001), *Current Contents* (1997 to September 1999), PsycINFO (1966 to May 2001), the Cochrane Controlled Trials Register (last search May 15, 2001), and bibliographies of relevant studies.

STUDY SELECTION

Studies were selected if they were randomized controlled trials (RCTs), enrolled patients having cervical or lumbar puncture for any reason, compared longer bed rest with immediate mobilization or short bed rest, and reported occurrence of headache in absolute numbers.

DATA EXTRACTION

Data were extracted on patient characteristics, reason for puncture, study quality, interventions, and occurrence of headache.

MAIN RESULTS

16 RCTs met the selection criteria. 1083 patients were assigned to immediate mobilization or short bed rest, and 1128 patients were assigned to long bed rest. Cervical or lumbar puncture was used for anesthesia (5 trials), myelography (6 trials), and diagnostic reasons (5 trials). 11 trials compared immediate mobilization with bed rest (0.5 to 24 h), and 5 trials compared short bed rest (0.5 to 8 h) with longer bed rest (4 to 24 h). In the 5 trials of puncture for anesthesia, data were not pooled because clinical heterogeneity existed; none of the trials showed superiority of longer bed rest (24 h in all 5 trials) over immediate mobilization or short bed rest (up to 8 h) in preventing postpuncture headache. In the 6 trials of puncture for myelography, longer bed rest (12 h in 1 trial and 24 h in 5 trials) was not more effective in preventing postpuncture headache than was immediate mobilization (Table). In the 5 trials of puncture for diagnosis, longer bed rest (30 min in 1 trial and 4 to 24 h in 4 trials) was not more effective in preventing postpuncture headache than was short bed rest (immediate mobilization in 4 trials and 30 min in 1 trial) (Table).

CONCLUSION

No evidence exists to show that longer bed rest is more effective than immediate mobilization or short bed rest in preventing headache after cervical or lumbar puncture.

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Longer bed rest (LBR) vs immediate mobilization (IM) or short bed rest (SBR) for preventing headache after cervical or lumbar puncture*

Reason for puncture	Weighted event rates		RRI (95% CI)	NNH
	LBR	IM or SBR		
Myelography	44%	41%	7% (–8 to 19)	Not significant
Diagnostic	34%	33%	3% (–19 to 21)	Not significant

*Abbreviations defined in Glossary; RRI, NNH, and CI calculated from data in article.

COMMENTARY

The review by Thoennissen and colleagues examines whether longer bed rest is more effective than immediate mobilization or short bed rest for preventing headache in patients having cervical or lumbar puncture. A previous review compared bed rest with early mobilization for various procedures and conditions, including puncture, and found no benefit of bed rest (1). However, the clinical interpretation was limited because of the search method and study diversity; reasons for puncture ranged from liver biopsy to threatened abortion.

The review by Thoennissen and colleagues adds to the literature by focusing on the single topic of headache after cervical or lumbar puncture. In addition, the authors did an excellent job of extending the search beyond English-language articles. A minor concern is that they did not search for unpublished trials. Because of the more focused and extensive search, the authors were able to confirm the lack of benefit of bed rest by doing a meta-analysis of 2 of the study subsets: puncture done for diagnosis and for myelography.

Descriptions of features of the patient presentation, duration, and severity of headache were often missing from trials. An interesting area for future study might be to evaluate which patients are most at risk for headache and whether a subgroup of patients might benefit from bed rest.

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Reference

1. **Allen C, Glasziou P, Del Mar C.** Bed rest: a potentially harmful treatment needing more careful evaluation. Lancet. 1999;354:1229-33.