

- 1 Ngan JHK, Fok PJ, Edward CS, *et al.* A prospective study on fish bone ingestion. Experience of 358 patients. *Ann Surg* 1990;211:459-62.
- 2 Evans RM, Ahuja S, Rhys Williams S, *et al.* The lateral neck radiograph in suspected impacted fish bones—does it have a role? *Clin Radiol* 1992;46:121-3.
- 3 Sungren PC, Burnett A, Maly PV. Value of radiography in the management of possible fishbone ingestion. *Ann Otol Laryngol* 1994;103:628-31.

Mobilisation of neck sprains

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Clinical scenario

A 45 year old man attends the emergency department after a road traffic accident. He complains of neck discomfort. He has discomfort on neck movement and clinical examination reveals muscular tenderness. You diagnose a neck sprain (whiplash injury). You wonder whether a early mobilisation is better than immobilisation in a soft collar.

Three part question

In [patients with a neck sprain] is [early neck mobilisation or immobilisation in a soft collar] better at [reducing early and late neck symptoms]?

Search strategy

Medline 1966 to 6/99 using the OVID interface. (exp whiplash injuries OR whiplash.mp OR {[exp neck injuries OR exp neck OR neck.mp] AND [exp sprains and strains OR sprain\$.mp OR strain\$.mp]}) AND [exp physical therapy OR physiotherapy.mp OR manual therapy.mp OR exp emergency treatment OR exp treatment failure OR exp treatment outcome OR treatment\$.mp or treat\$.mp] AND maximally sensitive RCT filter LIMIT to human and english.

Search outcome

Ninety nine papers were found of which 94 were irrelevant or of insufficient quality for inclusion. The five remaining papers are shown in table 2.

Comment

There are five prospective randomised controlled trials of various quality in this area. All suggest that early mobilisation is at least as good as rest in the early stages after injury, and better in the long term. The role of active physiotherapy is less clear.

Clinical bottom line

Patients with simple neck sprain (whiplash) should be advised about neck mobilisation and encouraged to start as soon as possible. They should not be given cervical collars.

- 1 Mealy K, Brennan H, Fenelon GC. Early mobilization of acute whiplash injuries. *BMJ* 1986;292:656-7.
- 2 McKinney LA, Dornan JO, Ryan M. The role of physiotherapy in the management of acute neck sprains following road-traffic accidents. *Arch Emerg Med* 1989;6:27-33.
- 3 McKinney LA. Early mobilisation and outcome in acute sprains of the neck. *BMJ* 1989;299:1006-8.
- 4 Gennis P, Miller L, Gallagher EJ, *et al.* The effects of soft cervical collars on persistent neck pain in patients with whiplash injury. *Acad Emerg Med* 1996;3:563-4.
- 5 Borchgrevink GE, Kaasa A, McDonagh D, *et al.* Acute treatment of whiplash neck sprain injuries. A randomized trial of treatment during the first 14 days after a car accident. *Spine* 1998;23:25-31.

Table 2

Author, date, and country	Patient group	Study type (level of evidence)	Outcomes	Key results	Study weaknesses
Mealy <i>et al</i> , UK, 1986 ¹	61 patients with acute whiplash injury Cervical collar <i>v</i> early active mobilisation	PRCT	Cervical movement at 8 weeks Intensity of pain at 8 weeks	Significantly better in mobilisation group (p<0.05) Significantly better in mobilisation group (p<0.05)	
McKinney <i>et al</i> , 1989, UK ²	170 patients with acute whiplash injury Rest (33) <i>v</i> home mobilisation (66) <i>v</i> physiotherapy (71)	PRCT	Cervical movement at 1 and 2 months Severity of neck pain at 1 and 2 months	Mobilisation and physiotherapy significantly better than rest (p<0.01) Mobilisation and physiotherapy significantly better than rest (p<0.01)	Rest group abandoned half way through trial All patients given collars
McKinney, 1989, UK ³	128 of the 170 patients in ref 2 followed up at 2 years Rest <i>v</i> home mobilisation <i>v</i> physiotherapy	PRCT	Proportion of patients with symptoms at 2 years	Significantly lower in advice alone group	68% follow up rate Rest group abandoned half way through trial All patients given collars
Gennis <i>et al</i> , 1996, USA ⁴	196 of 250 patients with whiplash injury following automobile crashes Cervical collar <i>v</i> no collar and unsupervised mobilisation	PRCT	Pain at 6 weeks	No significant difference	Short follow up period
Borchgrevink <i>et al</i> , 1998, Norway ⁵	201 patients with neck sprain that resulted from a car accident Cervical collar <i>v</i> unsupervised mobilisation	PRCT	Neck pain at 14 days and 24 weeks Neck movement at 14 days and 24 weeks	Significantly better in mobilised group Significantly better in mobilised group	Only 69% of patients completed the trial

PRCT = prospective randomised controlled trial.