

## SHORT REPORT

# Management of whiplash injuries presenting to accident and emergency departments in Wales

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*Emerg Med J* 2003;**20**:354–355

**Objectives:** To assess the use of soft collars for whiplash injuries presenting to Welsh accident and emergency departments and compare with recommended treatment as suggested by other literature.

**Methods:** Questionnaires were sent to 76 full time accident and emergency staff across Wales inquiring into their management of soft tissue sprains/strains of the neck and soft collar use.

**Results:** The overall response rate was 74% (SHO 70%, registrar 65%, consultant 100%). Half of consultants and more than half of the middle grade and junior staff reported soft collar use in this condition. As required wear was most commonly recommended and instructions for use ranged from one day only to until the patient was pain free.

**Conclusion:** The study recommends treatment protocols for whiplash injuries prescribing regular analgesia, early home exercises with the help of an advice sheet, and physiotherapy if symptoms persist.

Patients with neck pain after a whiplash injury from a rear impact road traffic accident commonly present to accident and emergency (A&E) departments in the United Kingdom. After an injury to the cervical vertebral column is excluded the diagnosis of a soft tissue sprain/strain or "whiplash" is made. The patient is often discharged with a soft collar and analgesia for symptomatic relief of pain. These collars discourage mobilisation and may prejudice a good functional outcome.<sup>1-4</sup> This study reviews the management of whiplash injuries presenting to A&E departments in Wales.

## METHODS

Twenty hospitals in Wales have on site A&E departments that employ full time medical staff. All doctors were posted a questionnaire (appendix 1) with a covering letter of explanation asking how they manage soft tissue sprains/strains of the neck. The returned questionnaires were then analysed.

## RESULTS

From the 20 hospitals where medical staff lists were requested 10 personnel departments replied. Altogether 76 questionnaires were sent to the A&E doctors employed by these hospitals. The overall response rate was 74% (SHO 70%, registrar 65%, consultant 100%).

All A&E departments with the exception of one had patient advice sheets. One hospital also had a standardised protocol for the management of soft tissue injuries of the neck. This same hospital advised against the use of soft collars and consequently did not stock soft collars in the A&E department. The responses to the questionnaire are detailed in table 1.

## For what conditions are soft collars indicated?

Soft tissue sprains/strains of the neck are by far the strongest indication for the use of a soft collar with almost half of consultants and more than half of the middle grade and junior staff reporting use in this condition. Osteoarthritis was considered a strong indication for soft collar use by 38% of the consultants questioned. One third of all grades of doctor did not feel that a soft collar needed to be prescribed in the A&E setting.

## Instructions given for the use of soft collars

Overall, the recommended instructions given to patients are to wear the collar only when required. Apart from two consultants a soft collar was to be worn when required or never prescribed. A third of registrars and SHOs recommended daytime use only with a small percentage prescribing continual wear.

There is a marked difference regarding the recommended period of use of soft collars between the three A&E grades. SHOs predominantly recommended wear until the patient was pain free, registrars for a maximum of two days, and consultants for a maximum of one week.

## The routine investigation and management of soft tissue sprains/strains of the cervical spine

Similar investigation and management options are used by all grades of medical staff. Advice, exercise, and analgesia are

**Table 1** Summary of questionnaire responses

	Percentage		
	SHO	Registrar	Consultant
Indications given for the use of soft collars			
Fracture	3	12	0
Osteoarthritis	19	18	38
Soft tissue sprain/strain	62	59	46
None of the above	35	35	31
Instructions given to patients prescribed soft collars			
Wear all the time	11	6	8
Day only	35	35	8
Night only	0	0	0
When required	31	41	46
Never prescribed	23	18	38
Length of time for soft collar use			
One day	12	6	0
two days	19	41	8
One week	15	23	46
Until pain free	31	12	8
Investigation and management options routinely used for soft tissue sprains/strains of the cervical spine			
Radiograph	50	24	46
Soft collar	35	47	23
Advice/exercise	85	83	100
Physiotherapy	0	24	31
Regular analgesia	81	71	62
PRN analgesia	31	29	28

prescribed by almost all doctors of all grades. Regular is preferred over "when required" analgesia. Radiological examination is used routinely by 50% of SHOs, 24% of registrars, and 46% of consultants in suspected soft tissue sprains/strains of the cervical spine to exclude possible fractures. Physiotherapy is not used routinely by SHOs and only by a quarter of registrars and a third of consultants. Soft collars are routinely used by almost half of the registrars as compared with a third of SHOs and a quarter of consultants.

## CONCLUSION

The use of soft collars in the A&E department in Wales continues to be common and widespread but is recommended, on the whole, for short-term use to help alleviate symptoms.

This study also shows the large disparity in the management of whiplash injuries in A&E departments in Wales. Not only were there differences in the advice and management of these injuries between departments but also between individual doctors in the same department. This highlights the need for a standardised protocol for the treatment of soft tissue sprains/strains of the neck in every A&E department.

Patients treated with physiotherapy show a significantly improved outcome related to both cervical movement and intensity of pain compared with those immobilised with a soft cervical collar.<sup>1-4</sup> Cervical movement is significantly improved at four weeks after injury if patients are mobilised early compared with no improvement if a soft collar is prescribed. At eight weeks there is a significantly greater improved range of movement in mobilised patients compared with those with a soft collar.<sup>1</sup> This outcome is further improved if active mobilisation is started early<sup>5</sup> with little difference between outpatient physiotherapy and home mobilisation.<sup>6</sup> Long term outcomes are also improved where early mobilisation reduces the incidence of persistent symptoms at two years from 45% to 23% as compared with immobilisation in a soft cervical collar.<sup>3</sup>

The traditional use of the soft collar for soft tissue sprains/strains of the neck is no longer considered best practice. The temporary relief of pain and support given by a soft collar may prolong the recovery of patients with these injuries. This will have social and economical implications with increased morbidity and a longer period of time before they are able to return to work. As many of these patients will be claimants the delayed recovery could also result in an increased expenditure for the insurer.

We recommend the following protocol for the management of whiplash injuries:

- No soft collar
- Regular analgesia
- Early home exercises with the help of an advice sheet
- Physiotherapy if symptoms persist

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Accepted for publication 31 July 2002

## Appendix I

Questionnaire for accident and emergency doctors

Grade	Consultant	SPR	SHO	Staff/Clinical assistant
1) <u>For what conditions are soft collars indicated?</u>				
	Fracture			<input type="checkbox"/>
	Osteoarthritis			<input type="checkbox"/>
	Soft tissue sprains/strains (whiplash)			<input type="checkbox"/>
	None of the above			<input type="checkbox"/>
2) <u>What instructions do you routinely give to patients with soft collars?</u>				
	Wear all the time			<input type="checkbox"/>
	Day only			<input type="checkbox"/>
	Night only			<input type="checkbox"/>
	Only when required			<input type="checkbox"/>
3) <u>How long do you advise the use of soft collars?</u>				
	Time period?			<input type="checkbox"/>
	Until pain free?			<input type="checkbox"/>
	Other?			<input type="checkbox"/>
4) <u>Which of the following do you routinely use for investigation/management of soft tissue sprains/strains (whiplash) of the cervical spine? (routinely <math>\geq 70\%</math> of the time)</u>				
	Radiograph			<input type="checkbox"/>
	Soft collar			<input type="checkbox"/>
	Advice/exercise			<input type="checkbox"/>
	Physiotherapy			<input type="checkbox"/>
	Regular analgesia			<input type="checkbox"/>
	When required analgesia			<input type="checkbox"/>
5) <u>For cervical spine soft tissue injuries does your unit have:</u>				
	A standardised protocol			<input type="checkbox"/>
	An advice sheet			<input type="checkbox"/>

## REFERENCES

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