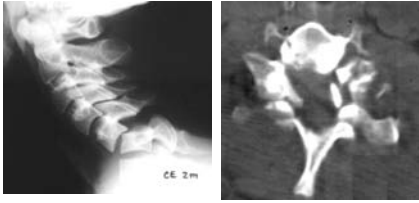


Cervical trauma



Michael Grevitt FRCS(Orth),
Centre for Spinal Studies,
Queen's Medical Centre campus,
Nottingham University Hospitals NHS Trust

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Objectives

- . Early recognition of cervical spine injury
- . Initial management
- . Dispel few myths...



2

'Ten Commandments' of Cervical Trauma



3

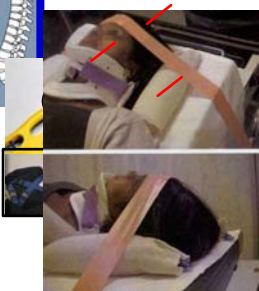
1. 'Thou shalt have a high index of suspicion...'

- . Polytrauma
- . Head-injury / unconscious
- . Road Traffic Accident
- . Ankylosing Spondylitis



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2. 'Thou shalt immobilise the neck.....'

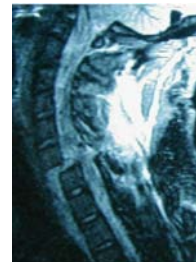


Stiff Neck Collar

5

3. 'Thou shalt seek evidence of spinal cord injury...'

- . Flaccid reflexia, tetraparesis
- . Bradycardia, hypotension
- . Diaphragmatic breathing
- . Priapism



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4. 'Thou shalt interpret the xrays correctly...'

- . Adequate xrays (include C7/T1)
- . Lateral xray . the 4 lines
- . Specialist views
 - . Oblique
 - . Swimmer's view

7

The image shows a lateral cervical spine X-ray on the left with a red line tracing the posterior vertebral body margins, labeled '>4mm'. On the right is a schematic diagram of the cervical spine with four red lines representing the 4-line rule. The lines are labeled with measurements: 10 mm (top), 4 mm (middle), and 15 mm (bottom). An angle of >11° is also indicated between the lines.

8

Two lateral cervical spine X-rays are shown side-by-side. The left image is a standard lateral view, and the right image is a swimmer's view, which is a lateral view with the neck flexed to visualize the lower cervical spine.

9

Two lateral cervical spine X-rays are shown side-by-side. The left image is labeled 'MG 52F 29.09.92' and has a red circle around a vertebral level with dashed white arrows pointing to a fracture. The right image is labeled 'MG 60F 01.03.00' and has a red circle around a vertebral level. An inset MRI image is visible in the top right corner of the right X-ray.

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'Swimmer's view' & Oblique

The image shows two X-rays. On the left is a swimmer's view of the cervical spine, with a white line tracing the vertebral bodies and a date '02.10.00'. On the right is an oblique view of the cervical spine, with a white line tracing the intervertebral foramina.

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5. 'Honour thy suspicions...'

The image shows three scans. On the left are two axial CT scans of the cervical spine. On the right is a sagittal MRI scan of the cervical spine, showing a vertebral fracture and associated soft tissue changes.

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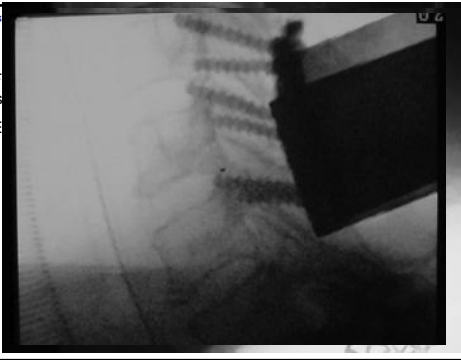
6. 'Thou shalt seek synchronous spinal fractures...'

- . Sub-axial fractures co-exist with 20% C1/2 fractures
- . 10% Cervical spine injuries have associated thoraco-lumbar fractures

Screen the whole spine

13


7.



14

8. 'Thou shalt avoid bed rest / traction / halo-vest in the elderly...'


- . High morbidity
- . ?Increased mortality with halo-vest in elderly
- . Early decision
 - . Occipito-cervical orthosis
 - . Surgery



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9. 'Thou shalt not worry about manipulation of the neck...'

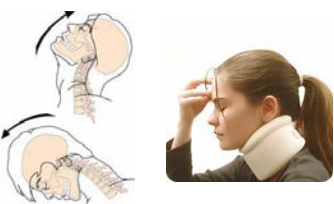
- . Maximal energy dissipation (& therefore trauma) at time of injury
- . Documented aggravation of spinal cord injury rare
- . An-lineq mobilisation of patient
- . Cervical spine most stable in extension (cf. Intubation)



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10. 'Thou shalt avoid collars in minor whiplash injury...'

- . Evidence for worse outcomes
- . ?Efficacy of early physiotherapy +/- facet joint injections



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Summary

- . High index of suspicion (especially spinal cord injury)
- . Adequate immobilisation
- . Correct interpretation of imaging
- . Don't forget the rest of the spine...

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Summary

- . Prevent secondary cord injury
- . Avoid prolonged immobilisation in elderly
- . Manipulation of neck unlikely to add harm
- . Don't give collars in whiplash injury...