The assessment, management and medicolegal reporting of whiplash injuries

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Assessment & management of whiplash injuries

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Expert Personal Injury Medical Reports

- Solicitors
- Injuries Board
- Insurance companies
- TCD & Tallaght University Hospital
• Cost of Insurance Working Group (CIWG) 2016 Dept of Finance
• PIC: Justice Nicholas Kearns
• Cost of Personal Injury claims
• Medical Advisor to PIC
Personal Injury Commission

- 80% claims are “whiplash”
- Variability in medical reporting
- Difficulty classifying Whiplash severity
- Challenges in estimating prognosis & causation
What is Whiplash?

• Overview on injury type
• Assessment and likely findings
• Update on Scientific evidence for forecasting prognosis & treatment updates
• PIC Changes to Medicolegal reporting
Whiplash associated disorder

- Involuntary Hyper Flexion- extension injury mechanism
- Rear end RTC
- “Railway spine”
- Rollercoaster
- Bungee jump
- Spectrum of injuries
Spectrum of Cervical Spine Injury

- Fracture
- Spinal cord injury
- Acute disc injury
- Nerve injury
- “Soft” tissue injury
  muscle & ligaments
Trapezius muscle
Whiplash Associated Disorder

- 6% of US population
- Quebec Task Force
- British Columbia Whiplash Initiative
- Ontario Protocol for Traffic Injury Management
- MINT (UK)
- 10-15 km/hr
- Rear impact
- Poor correlation with engineer studies
Anticipated symptoms

- Neck pain
- Stiffness
- Headache
- Shoulder pain
- Back pain
Predisposing risks

- Women
- Osteoporosis
- Degenerative changes
- Head rest position
- Rear impact
- Rotation before impact
Associated symptoms

- TMJ pain
- Head injury-direct and non contact
- Dizziness
- Poor Concentration
- Secondary psychological symptoms
Onset of symptoms

- 37% immediate
- 62-65% within 12 hours
- 90% within 24-48 hours
- Unless distracting injury

- Fagan & Foy Medicolegal reporting in trauma 4th edition
Diagnosis of WAD

- History of mechanism
- Examination: Flexion (% of normal)
- Extension
- Lateral rotation
- Lateral flexion
- Neurological changes
- Shoulder exam
Variable terms

• Soft tissue injury
• Neck strain
• Muscle tear
• Spinal injury
• Whiplash Associated Disorder
Quebec Taskforce WAD Grading

- Dynamic scale
- Internationally used
- Translates across research
- Validated (1995)
- Most useful in conjunction with a consistent history
QTF Whiplash Associated Disorder classification

- 0  no symptoms
- 1  Pain & stiffness & tenderness. Normal ROM
- 2  Abnormal ROM
- 3  Neurological signs
- 4  Fracture or dislocation
Impact on life

- Work
- Hobbies
- ADL
- Sleep
- Mental health
- Relationships
Neck disability index /50

- Pain
- Reading
- Personal Care
- Lifting
- Headaches
- Concentration
- Work
- Driving
- Sleeping
- Recreation
Visual Analogue Scale

No Pain

0  1  2  3  4  5  6  7  8  9  10

Moderate Pain

Worst Pain

0  2  4  6  8  10
• Can’t we just MRI everyone?
Imaging

- Xray  Canadian C spine rules
- CT
- MRI  disc injury

Indications - ? Change management neurological signs

- Neurophysiology testing
QTF WAD changes on imaging

- 0  no symptoms  Normal
- 1  Pain & stiffness & tenderness. Normal ROM  Normal
- 2  Abnormal ROM  Normal
- 3  Neurological signs Likely, though not always abnormal
- 4  Fracture or dislocation  Abnormal
Challenges in assessment

• “Degenerative” changes
• Pre-existing injury
• Fluctuating course is normal pattern
Treatment

- Physiotherapy (40% reduction in sick leave)
- Active rehabilitation
- No evidence for soft collars
- Analgesia
- Anti-inflammatory medication
- Patient education with positive expectation
- RCEM guidelines
Prognosis

- Variable in reports
- Vast literature range
- Poor research
- Timing of exam differs
Prognosis for the future

- Huge volume of literature
- Varied weight and standard
- 55% symptomatic at 17 yrs (Sweden)
- 50% cured by 3 months, 75% by 6 months (UK)
Prediction tools for pain > 3 months

- Journal of Orthopaedic Traumatology 2016 Oct
- Clinical Journal of Pain 2015 Feb;31;145-51

- Previous Chronic pain
- Depression
- Anxiety
- Employment
- Perceived injustice
Consensus view

• Symptoms at 3 months are likely to experience ongoing symptoms for up to 2 yrs in a fluctuating course
• Not “all or nothing” course of recovery
• Symptom free time frame differs from functioning ability
• WAD1-3: Physio and mobilise

• If after 3 months still have neurological signs- refer for investigation

• RCEM and Australasian College of EM guidelines

• Physio still of benefit to those with chronic pain (>3 months) for up to 2 years after accident.
Volume of opinions sought on injury

- Injuries board
- Plaintiff Solicitor
- Insurance Company
- Unregulated
Medical facts translated into a form that has a meaningful legal purpose

- Diagnosis & severity or grade of injury
- Impact on health, occupation, sport and psychosocial wellbeing
- Consistency with history
- Implications for future
Expert witness

- Independent
- Unbiased assistance to the Courts
- Never assume the role of advocate
- Support opinion with evidence
- Never omit material facts
- Clear boundaries of expertise
• France- mandatory postgraduate qualification in Legal and forensic Medicine
• Norway- no therapeutic relationship allowed with reporting doctor- ie not GP
• UK- MedCo panel
• Advice of AG- Mandatory panel would be “an impermissible interference with a claimant’s constitutional rights”

• Must have post graduate training
Report structure

• Injuries Board format
• Hand written
• Copy of clinical notes
• Descriptive Letter
PIC Recommendations

- QTF WAD grading
- Patient complaints to include effect on ADL, Work & recreation.
- Neck disability Index scoring
- % patient symptoms that are attributable to the accident
- Prognosis
Recommendations

• One standardised template
• Establishment of training programme for doctors
• Establish Irish standardised treatment based on Australian model.
• Research on incidence of whiplash.
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