

More than just a pain in the neck

Mark Goldman takes an in-depth look at the physiotherapist's role as expert in whiplash claims

There are a number of misconceptions about whiplash injury even in the medical profession. For the reader to properly understand the role of the physiotherapist it is important to dispel some myths about the nature of whiplash injury, beginning with an explanation of what whiplash injury actually is.

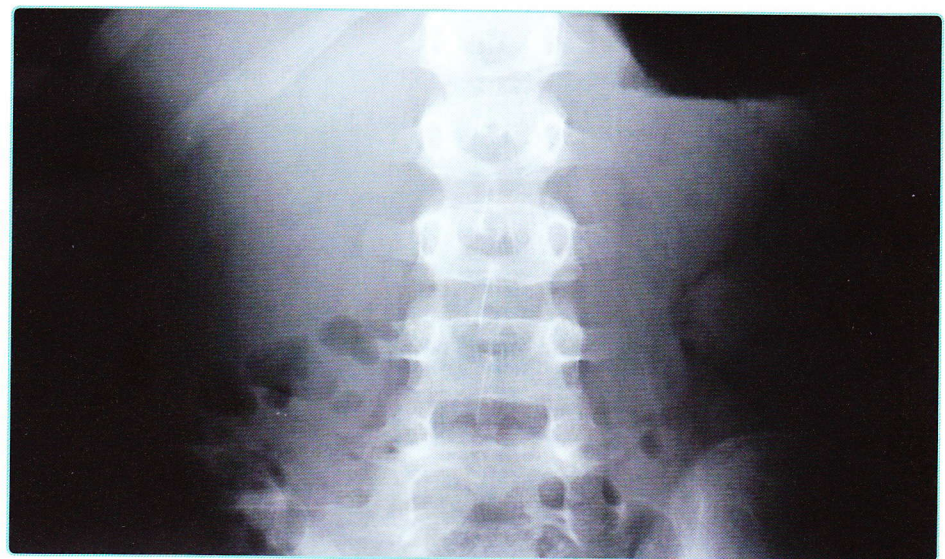
The term whiplash was first used to describe the whip-like motion of the neck which occurs during a rear or front end motor vehicle impact. As the term whiplash was intended to describe a mechanism of injury rather than a diagnosis, this has led to confusion in defining the problem, with some definitions focused on the mechanism, while others concentrate on the cause, or ensuing symptoms.

Perhaps the most straightforward and clear way to define whiplash injury is "an injury to the neck resulting from a motor vehicle accident." This is not to say that symptoms are solely restricted to the neck – they can and often do occur in many other areas of the body.

Symptoms

Based on research evidence the most common symptoms following a motor vehicle accident are neck pain (80-100%), headache (75%), low back pain (70%), mid back pain (50%), and neurological symptoms such as pins and needles or numbness in the arm or hand (50%). Shoulder symptoms are also common (15-50%), although they do not usually arise from the shoulder joint itself but rather the soft tissue surrounding it. A number of other symptoms such as dizziness, visual disturbance, auditory disturbance, difficulties swallowing and psychological symptoms can also occur.

There is a common myth that whiplash injury is a minor problem and will recover over time. In fact research evidence shows that at least one-third of sufferers will



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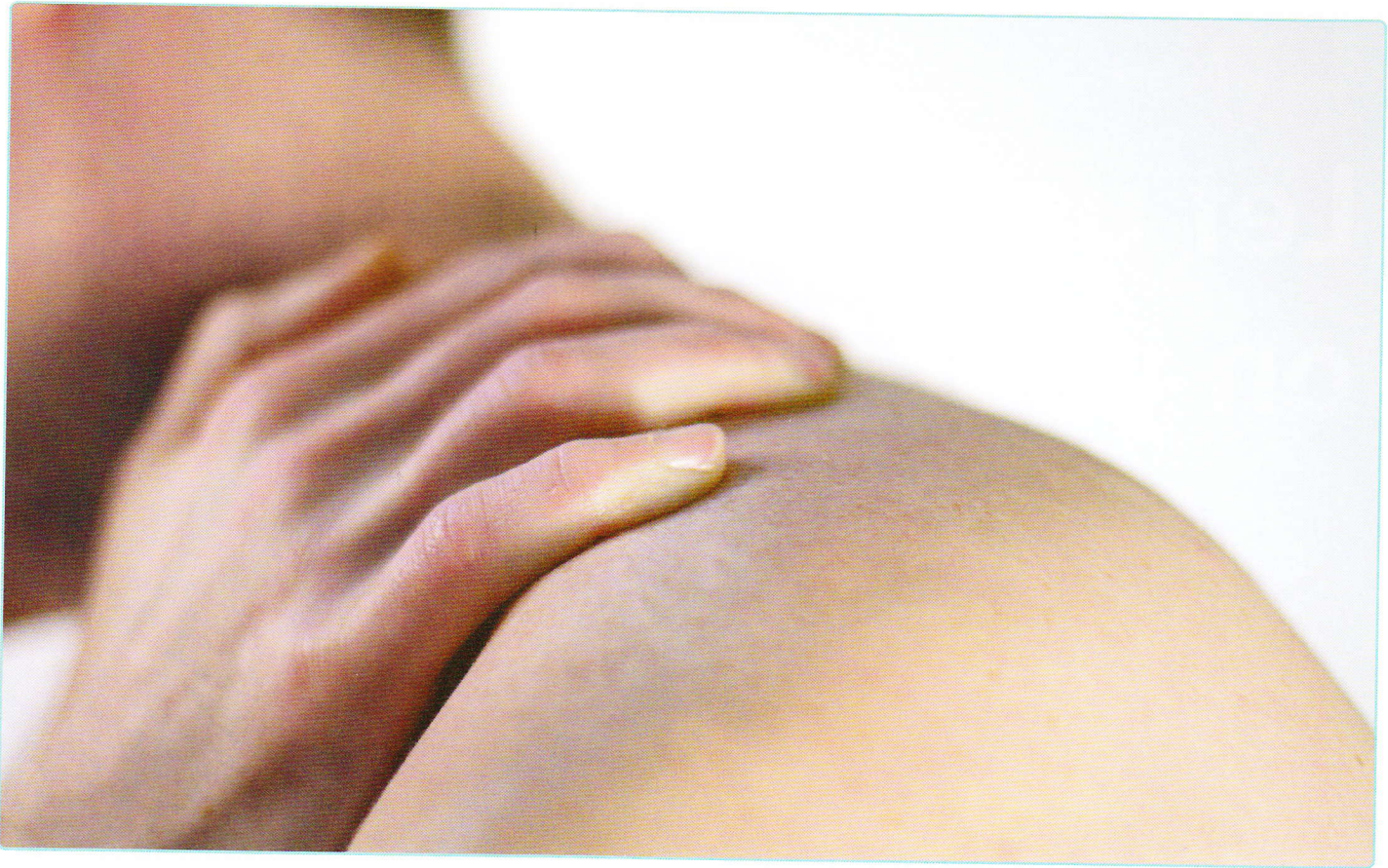
never fully recover. The majority of those who do recover do so within the first three months following injury, so to maximise the chances of recovery early treatment is essential.

Types of injuries suffered

Many methods have been used to determine the nature and severity of the injury caused during the whiplash event, from autopsy studies to crashing living subjects into walls. Autopsy studies have revealed a wide range of injuries including disc ruptures and small fractures to the vertebrae – but the obvious problem is that all subjects died of their injuries, and therefore do not necessarily reflect the injuries suffered by survivors.

At the opposite end of the scale crash sleds have been used to propel living subjects into walls, but for obvious reasons speed is limited (usually to a maximum of 8mph). MRI (magnetic resonance imaging) scans have been used in whiplash injury but are most effective at visualising larger injuries such as disc rupture and arterial dissection, rather than the injuries to the many small muscles, joints and nerves present in the neck.

Other methods of investigation include computer simulations, crash tests using dummies, and animal experiments. Pooling all the information available demonstrates that a wide variety of injuries are possible in the whiplash event including muscle tear,



ligament rupture, disc damage, vertebral fractures, nerve injuries and brain injury.

Given the wide variety of injuries that can occur it is clear that no one treatment can be applied to all sufferers, and treatment must be individualised. In the majority of cases, where surgery is not required, this is the physiotherapist's role.

The physiotherapist's role

Physiotherapists are the primary profession involved in the assessment and treatment of whiplash-injured individuals. It is the physio's job to assess the nature and severity of the condition, devise and implement a treatment programme, and (resources permitting) see the patient through to as full a recovery as possible.

As previously explained, there is a wide range of soft tissue and bone injuries that can occur during the whiplash event, nor is injury strictly limited to the neck. Therefore the physiotherapist's first step is to perform a thorough assessment. The first stage of the assessment is aimed at determining the severity, nature and area of the problems; this leads on to a detailed assessment of range of motion in all affected joints including the individual vertebra; postural and biomechanical analysis; and muscle strength and nerves are

also tested if appropriate. A number of special tests may also be used in order to determine problems such as ligament instability and reduced blood supply to the brain.

Following assessment a treatment programme is devised. This will depend on the individual case but in the early stages can include restriction of activity (including time off work), gentle joint and nerve mobilisations (specialised movements performed by the physiotherapist), specific exercises, and electrical treatments such as ultrasound and TENS (transcutaneous electrical nerve stimulation).

In the later stages treatment may include general and specific stretching and strengthening exercises, strong joint mobilisations, manipulation, and specific exercise programmes aimed at returning full function. It is often necessary to change the treatment plan as the problem progresses so re-assessment is an ongoing process.

Expanding role as experts

The physiotherapist's in-depth involvement in the assessment and treatment of whiplash-injured patients has led to an increasing medico-legal role.

In whiplash injury as in most other

musculoskeletal conditions (injuries to joints, muscles, ligaments and nerves rather than the internal organs and brain), the physiotherapist is the expert who will assess, monitor and treat the patient rather than a GP or medical consultant. Physiotherapists conduct a detailed assessment which takes around an hour; this enables them to quantify the level of disability, and accurately comment on severity, treatment and prognosis.

Degree level qualification has been standard in physiotherapy for some years. In addition many physiotherapists have undertaken advanced and/or masters level qualifications in a particular specialism such as musculoskeletal injuries, sports injuries and neurological problems.

The Medico-Legal Association of Chartered Physiotherapists keeps a register of physiotherapists with expertise in one or more areas of medico-legal work. The register can be viewed at www.mlacp.org.uk.

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