

# TMJ dysfunction

## Dr Paul A Tipton outlines the symptoms of dental whiplash injury

The presence of temporomandibular joint dysfunction after cervical whiplash injury was first recorded by Frankle in 1965. Sudden forward acceleration of a car results in a backwards thrust of the head, on the relaxed musculature of the neck, thus causing a violent hyper-extension of the head and neck. In modern cars head restraints aim to reduce hyper-extension injury but their value depends on the mode of installation and adjustment. A head restraint that is too low may even create a fulcrum for hyper-extension. After the hyper-extension phase comes a rebound or recoil in hyper-flexion, hence the use of the term whiplash. It is thus a rebound injury that often damages the temporomandibular joints leading to a diagnosis of temporomandibular joint dysfunction.

In many patients, however, the signs and symptoms of the whiplash injury go undiagnosed as there are often greater problems that have occurred as a result of the road traffic accident. This has led to what has been called "Late Whiplash Syndrome", where accident victims report symptoms arising several weeks or months after the accident. TMJ dysfunction is a term used to describe a multitude of signs and symptoms affecting the temporomandibular joint. One of the causative factors is indeed a whiplash injury, often as a result of a road traffic accident.

The symptoms of TMJ injury are:

- Clicks or grating noises in the joint upon opening.
- Tiredness and stiffness of the joint.
- Limited mouth opening
- Pain on the movement of the lower jaw
- Pain in the muscles moving the lower jaw
- Pain in and around the temporomandibular joint
- Deviation of the lower jaw to one side when opening
- Locking or dislocation of the lower jaw

It is therefore common that many patients claiming motor vehicle related trauma as a cause of their TMJ disorder do not recognise the problem until several weeks after the accident has occurred.

### Diagnosis

In a study in 1993, Kromm suggested that the poor diagnosis of TMJ dysfunction after a road traffic accident was because the diagnosis often lay in a grey area between the medical and the dental professions. Clinical evidence and a recent report on an experimental model suggests simultaneous involvement of the temporomandibular joint at the same time of the accident because of other life threatening emergencies may be seen as the reason the temporomandibular joint is diagnosed at a later stage. The study concluded that the routine examination of the temporomandibular joint and masticatory system in all patients with

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cervical whiplash injury should be standard procedure.

### Dento-legal diagnosis

From a legal standpoint, many of these patients go undetected as the normal referral route after a road traffic accident and whiplash injury is most often to an oral or orthopaedic surgeon. It is therefore important to the solicitor involved in personal accident injury work that he recognises the association between whiplash injury and TMJ dysfunction. The solicitor would then reduce the risk of overlooking a significant aspect of the client's accident claim and increase recoveries by referring onto the restorative dentist for an expert opinion. The cost involved in treatment of the whiplash injury can be significant, in the range of £1,500 to £75,000. ■