Treatment

I recommended she continued another month of physiotherapy and regular daily neck stretches and to avoid any neck manipulations.
She returned a month later with slight improvement of her pain but it was still severe enough to require daily use of analgesics.
Based on the severity of her symptoms and failure of conservative treatment, I proceeded to perform bilateral facet joint blocks at C3/4 and C4/5. This is based on the location of her pain. The procedure is called pulsed radiofrequency neurotomy. This procedure blocks medial branch which supplies the facet joints and it is from these damaged joints that the pain signals arises. This block is effective for treating these whiplash injuries (1).

Discussion

It is of paramount importance to rule out any instability or neurological injuries if you are the first doctor to assess these acutely injured patients.

A good method to assess cervical spine instability is to assess the range of neck movement. In an awake and alert adult, the ability to freely move the neck more than 45 degrees in all directions unaided and without undue pain rules out any instability.

However, in patients over 65 years old or involved in a dangerous mechanism of injury (fall down 5 steps of stairs and high speed car crashes) or those who complains of parathesia in the limbs should be considered to have potentially unstable spine unless proven otherwise. The recommended cervical spine x-rays would consist of open mouth view of C1, lateral (must include C7-T1 junction) and anterio-posterior views (2).

Whiplash associated disorders is the official name for the constellation of symptoms affecting the neck that are triggered by an accident with an acceleration-deceleration mechanism. It comprises of a range of symptoms from neck pain and neck ache to headaches.

A minimum of 4-6 weeks of active mobilization is better than passive treatment. Radiofrequency neurotomy to block the medial branch of facet joints have been shown to reduce whiplash induced pain (3,4) but its exact analgesic mechanism is not fully eluidated.

Recent studies have studied electrical fields with up-regulation of IEG and c-fos. One theory is that C-fos protein, products of IEG expression, is able to alter neuronal transmission(5,6).

Outcome

Miss D had the procedure as an outpatient and when she returned to see me after two weeks, she reports her pain has started to improve. The immediate improvement after the injection is due to the infiltration of lignocaine and marcaine but the prolonged effect due to the RF is expected to last anything between 6 months to years.

References

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