Novel steroid infiltration technique of the carpal tunnel

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This report describes a novel technique of steroid infiltration of the wrist to treat symptomatic carpal tunnel syndrome. Our approach potentially reduces direct trauma to the median nerve when compared to current conventional techniques. The use of a cannula allows infiltration directly into the carpal tunnel and advancement of the blunt tip minimizes the risk of sharp trauma to the median nerve and adjacent tendons. This avoids the unpleasant, shooting pain frequently experienced by patients using traditional needle infiltration. We anticipate this would be of particular benefit in reducing pain associated with the procedure.

The median nerve was located by strongly flexing the fingers and thumb. This manoeuvre allows the median nerve to be identified by rolling it in an ulnar to radial direction. A small blister of local anaesthetic was infiltrated into the volar aspect of the wrist over the proximal wrist crease. A small nick in the skin directly ulnar to the median nerve allows the cannula to pass underneath the transverse carpal ligament (TCL) and parallel to the nerve and into the carpal tunnel. The cannula is passed at a 45-degree angle underneath the TCL and then the angle is further reduced to prevent contact with the median nerve as the cannula is fed distally. Therefore, blunt piercing of the TCL does not take place, but rather the antebrachial fascia of the forearm. Prior to infiltration the cannula tip should be at its most distal position. The steroid is slowly infiltrated (10mg of triamcinolone) into the tunnel and the cannula is withdrawn proximally while infiltrating. The technique is approachable, even with a slight learning curve to it. It can be taught to trainees and most importantly its comfortable for the patient. The trajectory and length of the cannula.

Biography

Nauar Knightly is a plastics and reconstructive trainee in Ireland with a special interest in academia and research. He has won awards for his teaching and has multiple papers published in the field of plastic and reconstructive surgery. He has presented his research at international conferences in both Ireland and Australia. He is currently a higher specialist trainee and holds a masters degree in surgery and an ungraduated in both medicine and chemistry. Dr Knightly is an experienced tutor and was given an award for excellence in clinical teaching in 2019 from the Royal College of Surgeons in Ireland.

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