

LOW PRIORITY PROCEDURE - Policy Carpal Tunnel Syndrome

Policy author: SY&B CCGs

Policy start date: December 2016

Review date: December 2018

Policy Summary

Patients with Carpal Tunnel Syndrome (CTS) typically present with nocturnal dyesthesia in the hands that wears off with activity. The presence of a positive Phalen's manoeuvre or Tinel's test confirms the diagnosis.

Nerve conduction studies are NOT generally needed to confirm the diagnosis. In elderly patients the condition may develop insidiously.

Eligibility Criteria

The CCG will only fund Carpal Tunnel Surgery when **either** of the following criteria is met:

- Severe symptoms at presentation (including sensory blunting, muscle wasting, weakness on thenar abduction or symptoms significantly interfere with daily activities)*, **OR**
- If there is no improvement in mild-moderate symptoms after 6 months conservative management which includes nocturnal splinting used for at least 8 weeks (documentation of dates and type(s) of conservative measures is required)

*This criterion includes all individuals whose symptoms are severe where six months conservative management would be detrimental to the management of the condition. Evidence should be provided to demonstrate severity of symptoms.

Rationale behind the policy decision

Approximately 80% of individuals with CTS initially respond to conservative treatment¹. Evidence from observational studies shows symptoms can spontaneously resolve in some individuals particularly among young people or carpal tunnel with short duration of symptoms or due to pregnancy². Surgery should be considered when individuals fail to respond to conservative treatment. There is good evidence that nightly splinting the wrist is effective in the short term in about 50% people^{3, 4} by helping to decrease repetitive flexion and rotation, thus relieving mild soft tissue swelling or tenosynovitis. Kurger⁵ found that splinting is probably most effective when it is applied within the three months of the onset of symptoms. When worn for four weeks a nocturnal wrist splint was found to be more effective than no treatment in relieving the symptoms of carpal tunnel syndrome⁶. Any improvement should be apparent within 8 weeks⁵.

There is weak evidence that non-steroidal anti-inflammatory drugs (NSAIDs), diuretics and vitamin B6 are effective in relieving symptoms⁷. There is strong evidence that local corticosteroid injections relieves symptoms in CTS more than oral corticosteroids in the short term (<3months)⁸. There is strong evidence that local corticosteroid injection will provide short term improvement in symptoms 1 month after injection compared with a placebo⁹. Direct injection of corticosteroid into the median nerve carries the potential of severe axonal and myelin degeneration⁴. Although median nerve damage from intraneural injection has been reported in eight cases, pooling the reported trials of steroid injection yields a total of over 3000 injections performed without serious complications, and the risk may be estimated at <0.1% in competent hands. Therefore local steroids given are recommended⁴ for the management of carpal tunnel syndrome. There is contradictory evidence on the use of ultrasound therapy for the longer term management of carpal tunnel syndrome; further studies would be required before recommending this treatment³.



Individuals who do not respond to conservative treatment, including injection and those with severe nerve entrapment (usually confirmed by nerve conduction studies, thenar atrophy or motor weakness), carpal tunnel release surgery should be considered. For mild-moderate CTS evidence suggests that surgery is probably more effective than splinting, but it is unclear whether it is better than steroid injection. There is strong evidence that open or endoscopic carpal tunnel release is effective treatment for carpal tunnel syndrome⁴.

References:

1. Bickel, K. (2010). Carpal Tunnel Syndrome. *Journal of Hand Surgery*, 35 (1), pp. 147-151285-1295
2. Massy-Westropp. N, Grimmer.K and Bain. G, (2000). A systematic review of the clinical diagnostic tests for carpal tunnel syndrome, *J Hand Surgery*, 25A, pp. 120–127.
3. Gerritsen. A, de Krom. M, Struijs. M, Scholten. R, de Vet.H, Bouter. L. (2002) Conservative treatment options for carpal tunnel syndrome: a systematic review of randomised control trials. *Journal Neurology*, 249, pp.272-80
4. Bland, J.(2007). Carpal Tunnel Syndrome. *BMJ*, 335:343-6
5. Kruger. V, Kraft.G, Deitz.J, Ameis.A, Polissar.L. (1991). Carpal tunnel syndrome: objective measures and splint use. *Arch phys Med Rehabil*, 72, pp.517-20
6. Manente. G, Torrieri. F, Di Blasio. F, Staniscia. T, Romano. F, Uncina. A. (2001). An innovative hand brace for carpal tunnel syndrome: a randomised controlled trial. *Muscle Nerve*, 24, pp. 1020-5.
7. Gerritsen, A.A., Uitdehaag, B.M., van Geldere, D. et al. (2001) Systematic review of randomized clinical trials of surgical treatment for carpal tunnel syndrome. *British Journal of Surgery*, 88(10), pp.1285-1295
8. Wong. S, Hui. A, Tang. A, Ho. P, Hung. L, Wong. K. (2001). Local vs systematic corticosteroids in the treatment of carpal tunnel syndrome. *Neurology*, 56, pp.1565-7.
9. Marshall, S., Tardif, G. and Ashworth, N. (2007) *Local corticosteroid injection for carpal tunnel syndrome (Cochrane Review)*. The Cochrane Library. Issue 2. John Wiley & Sons, Ltd.
10. British Society for Surgery of the Hand. BSSH Evidence for Surgical Treatment (BEST) 1: Carpal Tunnel Syndrome.
http://www.bssh.ac.uk/patients/conditions/21/carpal_tunnel_syndrome

