Thumb Spica Cast For the Management of De Quervain, S Tenosynovitis -  isempty
INTRODUCTION

De Quervain’s tenosynovitis is named after Swiss Surgeon Fritz de Quervain, who mentioned it in 1895 for the first time and reported a series of five cases in 1912 [1]. The condition De Quervain’s disease is referred for the first time in an article which was read at a series of five cases in 1912 [1]. The condition De Quervain’s tenosynovitis was made by 3 clinical findings, pain at the radial wrist with resisted extension or abduction of the thumb, tenderness at the wrist dorsal extensor compartment over the styloid process of the radius, and a positive Finkelstein test. Patients with a previous history of acute trauma, wrist fracture, steroid injection, pregnancy, or rheumatoid arthritis were excluded from the study. The severity of pain was noted on Visual analogue scale (VAS), with 0 no pain, 1 to 3 as mild, 4 to 6 as moderate and 7 to 10 as severe. All patients were subjected to thumb Spica cast for 4 weeks. After cast removal improvement in the above 3 clinical signs was measured by VAS. The data was analyzed by SPSS version 20.

RESULTS

Out of 44 patients, there were 29 (65.9%) females and 15 (34.1%) males age ranging between 22 to 60 years with a mean age of 43.00 ± 11.12. Duration of the disease was 1 to 10 weeks with a mean of 4.86 ± 2.39 right sides (dominant hand) were involved in 35 (79.5%) and left side in 9 (20.5%) patients. All patients were given Spica cast for 4 weeks and patients were discouraged to use any analgesics. After 4 weeks the cast was removed and the response was assessed in terms of three clinical findings by VAS score. Out of 44 patients, fourteen (31.8%) patients had no pain (0), eighteen (40.9%) patients had mild (1-3) pain, twelve (27.3%) had moderate (4-6) pain and there was no patient with severe pain.

Local area of skin de pigmentation was seen in 2 patients. These changes reversed in 6 weeks’ time. There was no incidence of nerve injury, tendon rupture or infection.

Conclusion: Our study shows that casting alone is a viable option for the treatment of De Quervain’s tenosynovitis.

Keywords: De Quervain’s tenosynovitis; Thumb Spica cast; Visual Analogue Scale (VAS); Pain; Conservative
11.12 years) (Table 2). The right hand was affected in 35 (79.5%) and left in 9 (20.5%) patients (Table 3). The dominant hand (Right) was most commonly affected. The mean duration from the onset of symptoms to enrolment for this study was 4.86 ± 2.39 weeks (range 1 week to 10 weeks) (Table 2). At the start of study, the severity of pain on 10cm VAS was recorded. Twenty-nine (65.9%) had severe pain (VAS 7-10), and fifteen patients (34.1%) had moderate pain (VAS 4-6) (Table 4). All patients were given Spica cast for 4 weeks and patients were discouraged to use any analgesics. After 4 weeks the cast was removed and the response was assessed in terms of three clinical findings, pain at the radial wrist with resisted extension or abduction of the thumb, tenderness at the wrist dorsal extensor compartment over the styloid process of the radius, and Finkelstein test. VAS score was measured and categorized as no pain (VAS 0), mild pain (VAS 1-3), moderate pain (VAS 4-6) and severe pain (VAS 7-10).

Out of 44 patients, fourteen (31.8%) patients had no pain (0), eighteen (40.9%) patients had mild (1-3) pain, twelve (27.3%) had moderate (4-6) pain and there was no patient with severe pain (Table 5).

Local area of skin depigmentation was seen in 2 patients. These changes reversed in 6 weeks time. There was no incidence of nerve injury tendon rupture or infection.

DISCUSSION

De Quervain’s Tenosynovitis, although an insignificant condition, is very serious disorder for the patient as it hinders the performance of the basic function of the hand. Various methods of treatment for De Quervain’s Tenosynovitis have been advised over the years including analgesics, splinting, multiple corticosteroid injections, thumb Spica cast and surgical release. Intralesional corticosteroid injection is effective with cure rates of up to 50%. The combination of two treatment modalities intralesional steroid and immobilization by Spica cast is hypothesized to be much better than a single modality alone.

A total of 44 patients were included in the study. There were 29 (65.9%) females and 15 (34.1%) males age ranging between 22 to 60 years with a mean age of 43.00 ± 11.12. Duration of the disease was 1 to 10 weeks with a mean of 4.86 ± 2.39 right sides (dominant hand) were involved in 35 (79.5%) and left side in 9 (20.5%) patients. On presentation 15 patients had moderate pain (VAS 4-6) and 29 patients had severe pain (VAS 7-10).

After cast removal at 4 weeks out of 44 patients, fourteen (31.8%) patients had no pain (0), eighteen (40.9%) patients had mild (1-3) pain with a success rate of (72.7%), twelve (27.3%) still had moderate (4-6) pain leading to a failure rate of (27.3%) and there were no patients with severe pain (7-10).

In a local study by Shinwari, et al. [8], out of 35 patients 32 (67.0%) had no pain after casting alone for 4 weeks with a success rate of (67.0%) and 13 (37.0%) patients had no response to casting with a failure rate of (37.0%). These results are comparable to our study.

In another study by Mehdinasab SA, et al. [11], who studied the results of casting alone in which out of 36 patients, 13 (36.1%) were completely pain free and 23 (63.9%) had no pain relief with a success (36.1%) and failure (63.9%) rate respectively.

Rabin A, et al. [13] showed in his study that conservative management is more effective and concluded that all the participant in his study at six months period had reported minimal pain and no recurrence of symptoms using Numeric Pain Rating Scale and Disabilities of the Arm, Shoulder and Hand.

Cavaleri R, et al. [14] has done a study on conservative versus steroid injection for the management for De Quervain’s disease in which he concluded that cast immobilization with combination of corticosteroid injection are more effective than injection alone in the treatment of de Quervain’s disease.

CONCLUSION

No signal treatment is effective in the management of De Quervain’s disease. Combination therapy either in form of surgery with pharmacological treatment or steroid injection with casting is more effective as shown in literature. However, the current study of casting alone is also a viable option for the treatment of De Quervain’s tenosynovitis.

REFERENCES


3. Hoffmann PH. A common, undescribed affection of the extensor muscles of the thumb. Trans Am Ortho Assoc. 1898; 11: 252-256.


