LOCAL CORTICOSTEROID INJECTION FOR TREATMENT OF DE QUERVAIN’S DISEASE
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ABSTRACT

BACKGROUND
De Quervain’s disease or stenosing tenosynovitis of first dorsal compartment of the wrist is common wrist pathology. Pain at radial site of wrist results from resisted gliding of the abductor pollicis longus and extensor pollicis brevis tendon in the fibro-osseous canal. Diagnosis is made on physical examination.

MATERIALS AND METHODS
A retrospective study was done in Orthopaedic Department of Kalinga Institute of Medical Sciences, Bhubaneswar, for two years from January 2014 to December 2016. 56 patients were included in the study.

RESULTS
Out of 56 patients treated with local intrasheath corticosteroid injections, 10 cases failed and were treated with surgical decompression.

CONCLUSION
Conservative management of de Quervain’s disease with local hydrocortisone injection into first dorsal compartment is first line treatment of choice. Surgical decompression is done only to those patients who failed following injection.

KEYWORDS
De Quervain’s Disease, Intrasheath Injection, Corticosteroid Injection.

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BACKGROUND
De Quervain’s disease is localised pain on lateral side of wrist over styloid process of distal radius, which is aggravated by ulnar deviation of wrist. This is called Finkelstein’s test positive. Females are more affected than male. Maybe associated with pregnancy and rheumatoid arthritis. A systemic review of potential risk factors discussed in literature did not find any evidence of casual relationship with occupational factor. However, researches in France found personal and works-related factors were associated with de Quervain’s disease in working population. Proponents of view that de Quervain’s disease is a repeated strain injury. Consider postures where thumb is held in abduction and extension to be predisposing factors. Workers who perform rapid repetitive activation involving pinching, grasping, pulling or pushing have been considered at increased risk.

In 1895, a Swiss surgeon Fritz de Quervain first described this condition and published five case reports. The condition has subsequently born in this name as de Quervain’s disease. De Quervain tenosynovitis is an entrapment tendinitis of the tendon contained within first dorsal compartment of wrist.

It causes pain during thumb motion due to abduction and extension. De Quervain’s disease involves non-inflammatory thickening of both tendon abductor pollicis longus and extensor pollicis brevis and synovial sheath that the tendon run through.

The disease is diagnosed clinically based on history, physical examination and +ve Finkelstein’s test. X-ray helpful to ruling out offending bony pathology.

Management of this tenosynovitis was rest, analgesics and then surgery. But, Doctor Jarrod Ismond in 1955 first treated this condition with intrasheath hydrocortisone injection successfully. In 1972, McKenzie (1972) who suggested that corticosteroid injection was first line of treatment and surgery should be reserved for failed hydrocortisone injection.

MATERIALS AND METHODS
A retrospective study was done in Kalinga Institute of Medical Sciences from January 2014 to December 2016. 56 patients were included in study. Diagnostic criteria were pain and tenderness over styloid process of distal radius over wrist, which is aggravated by use of thumb and a +ve Finkelstein’s test. Sometimes, a nodule is felt over styloid process of wrist. Patient with rheumatoid arthritis, trauma to wrist or local infection at wrist were excluded in the study.

All the patient were treated with analgesic, rest and physiotherapy initially, but they again come back with
recurrence of pain after sometime. Then, these patients were treated with intrasheath injection of 2 mL methyl prednisolone and 2 mL lignocaine into first extensor compartment at interval of 2 weeks with total 3 doses. Under sterile condition, this injection was injected in 5mL syringe by one of the author personally into the first dorsal compartment of wrist keeping the wrist in ulnar deviation as an OPD procedure. Intrasheath injection was confirmed by absence of swelling in subcutaneous tissues after pushing injection and absence of resistance during pushing injection. All the patients were followed up upto one to two years. Ten patients did not get relief after injection. Surgical release was done in OT in these cases under local anaesthesia under tourniquet control.

RESULTS
Out of 56 patients in present study, female patients were 36 and male patients were 20 in number between 25 years to 58 years age group. Right hand was affected in 46 patients and left hand was affected in 10 patients. By the time patients reached us for treatment it was one month to six months. All the patient treated initially with analgesic, rest and physiotherapy as they did not agree for injection as first line of treatment. After failure with this treatment, they again came for local intrasheath injection of hydrocortisone. Three doses of methylprednisolone (80 mg, 2 mL) mixed with 2%, 2 mL lignocaine were given into first dorsal compartment at intervals of 2 weeks. Ten cases underwent surgical decompression, which failed after local hydrocortisone injection. There was palpable nodule over styloid process on wrist in these resistance cases, which required surgery. White discoloration of skin was present at injection site in 6 cases due to superficial injection of steroid. There was no infection, no tendon rupture.

DISCUSSION
Jarrod Ismond used local intrasheath hydrocortisone first in de Quervain’s disease in 1955 successfully.7

Bringham and woman hospital guidelines for the treatment for de Quervain’s disease recommends corticosteroid local injection maybe very helpful and it should be considered if pain symptoms persists beyond 6 weeks of conservative treatment.8 Brinker MR recommended hydrocortisone injection after 2 weeks of failure of conservative treatment.10

In the present study, hydrocortisone injection were recommended after 2-4 weeks of treatment failure by medicine and rest. In a study by Harvey et al,11 80% patient got relief by hydrocortisone injection. In the present study of 56 patients, 46 patients got relief by local hydrocortisone injection, i.e. 82%. 10 patients (18%) underwent surgical decompression with thickened sheath and resistance to hydrocortisone injection. Patient with surgical decompression were received of pain as compared to study by Scheller et al.12

Surgical release is a good procedure for relief of pain, but should not be done when this can be cured with hydrocortisone injection with success of around 80%.

McKenzie in 1972 suggested that hydrocortisone injection was first line of treatment and surgery should be reserved in unsuccessful injection.8 A systemic review and meta-analysis published in 2013 found the injection hydrocortisone seems to be as effective form of conservative treatment of de Quervain’s disease in approximately of 50% patients, although more research is needed regarding the extent of any clinical benefit.13 Palliative treatment include a splint that immobilised the wrist and thumb to IP joint and analgesic. But, systemic review and meta-analysis do not support the use of splint over hydrocortisone injection.14,15

Surgical release, i.e. (first dorsal compartment must open longitudinally) is documented to provide relief in most patient.16 The most important risk is injury to the superficial radial sensory nerve during surgery.

CONCLUSION
Conservative management of de Quervain’s tenosynovitis with local intrasheath hydrocortisone injection is recommended as first line treatment of choice over surgical decompression. Surgical decompression is reserved for failed, unsuccessful hydrocortisone injection or recurrence of pain after injection.

REFERENCES


