Original Article

Result of intralesional injection of methyl prednisolone with local anaesthetic in de-quervain's disease

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Summary
Two hundred fifty five patient of de'Quervain’s disease were included in this series with local corticosteroid and with local anaesthetic xylocain infiltration into the common tendon sheath of abductor pollicis longus and extensor pollicis brevis avoiding the tendons. Two hundred fifty patients were followed up for a period of 6 month to 1 year, (Mean average 8.2 months). Five patients absconded from follow up. Age range of the patients were 35 years to 55 years (average mean 42 years). Sex incidence men 38 (5.2%), women 212 (84.8%). Finklestein’s test and tenderness clinically assessed in the patients over the tip of radial styloid process. 212 (84.8%) patients cured after one injection. 32 (12.8%) patients needed 2 injections for cure. 6 (2.4%) partially cured, subsequently needed operative treatment for full recovery. Bilateral affections were noted in 36 (14.4%) patients, No side effect encountered in patients. Middle aged female, mostly of middle or lower socioeconomic classes affected. All patients were treated with nonsteroidal anti-inflammatory drugs (NSAIDs) for one week either orally or in the form of suppository in patients with peptic ulcer disease.

Introduction
The disease is the painful thickening of the tendon sheath containing extensor pollicis brevis and abductor pollicis longus was first described by Fritz de Quervain almost 100 years back. The condition is due to prolonged or excessive friction at the distal end of radius. The sheath becomes inflamed and thickened but tendons are normal.

Patients and methods
Between August 1996 to December 1999, a total 255 patients of de-Quervains disease were treated with infiltration of 1 cc of inj. Methyl prednisolone with 1.5cc 2% Xylocaine within the tendons sheath of abductor pollicis longus and extensor pollicis brevis in Rehabilitation institute and Hospital for Disabled (RIHD), Dhaka, Hobigong and Brahmanbaria Sadar Hospital and in private chamber. Out of 255 patients, 5 absconded from follow up and total 250 patients were taken into the consideration for the study. Out of 250 patients, 212 patients (84.8%) cured after one injection, 32 patients (14.4%) cured after two injections with 6 weeks interval, 6 patients partially cured subsequently needed operative treatment.

After clinical assessment with history of duration of pain which aggravates on movements of thumb during resisted abduction with difficulty in grasping, gripping and wringing. Pain is localised or radiating proximally or distally. Localised swelling or tenderness is present over the radial styloid process. It is confirmed by Finklestain’s test i.e patient places his or her thumb over th palm. fingers close over it. Physician then moves the patient’s wrist in ulnar deviation which incites pain at radial styloid Radiological examination of the wrist is only done in patients who needed second injection for cure or cured partially to see irregularities in radial styloid process or osteoarthritic change in the wrist or carpal joints.

Methods
After confirmation of the diagnosis clinically, under all aseptic precautions 1cc injection of Methyl prednisolone 40mg mixed with 1.5cc 2% Xylocaine taken into 5cc disposable
syringe was infiltrated into the stenosed tendon sheath. Care taken so that drug is not infiltrated into tendon. Local anaesthetic agent was used to get immediate relief of pain and confidence. Naproxan and Ranitidine after meal 12 hourly used for 5 to 7 days.

Results
The results were analyzed on basis of the patients’ statements regarding the relief of pain and clinical findings. 212 patients (84.8%) cured after one injection of corticosteroid mixed with local anaesthetic, 32 patients (14.4%) cured after two injections with 6 weeks interval, 6 patients (2.4%) partially cured after two injections with recurrence of symptoms later on, subsequently underwent surgical treatment. All patients were treated with NSAIDs bd. after meal orally or by suppository per rectum twice daily in those patients with peptic ulcer problem. Ranitidine preparations 150mg twice daily prescribed to all patients as coverage treatment of NSAIDs.

Table-I. Showing the age distribution of the patients

<table>
<thead>
<tr>
<th>Age Group</th>
<th>No of the patient</th>
<th>Distribution of the patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-45</td>
<td>177 (70.80%)</td>
<td></td>
</tr>
<tr>
<td>45-55</td>
<td>73 (29.2%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>250 (100%)</td>
<td></td>
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</tbody>
</table>

Table-II Showing Prevalence of the disease is much more common in female patients

<table>
<thead>
<tr>
<th>Patients</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>36</td>
<td>15.2%</td>
</tr>
<tr>
<td>Female</td>
<td>212</td>
<td>84.8%</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table - III Showing out of total 250 patients, 212 (84.8%) cured by one injection, 32 (12.8%) cured by two injections and the remaining 6 (2.4%) not responded with 3 injections required operative treatment. P< 0.001 i.e recovery result is statistically significant.

Discussion
de’-Quervain’s disease is a localised disease. Local infiltration of methyl prednisolone mixed with 2% xylocain provides good result. 250 patients of the series were under the treatment of NSAIDs and physiotherapy without any benefit but after infection of 40mg methyl prednisolone mixed with 1.5cc of 2% xylocain into common tendon sheath of abductor pollicis longus and extensor pollicis bravis provided very good result without side effects.

The tendons of abductor pollids longus and extensor pollicis bravis glide through the fibro-osseous tunnel between extensor retinaculum and radial styloid process. In de’-Quervains disease there is tenosynovitis of the two tendon’s common styloid process.

Due to repeated friction as a result of overuse and frequent unusual movements of the thumb and wrist specially supination-pronation or crystal deposition due to gout, the tendon sheath becomes thickened, swollen and stenosed but the tendons remain normal. As a result of anatomical variation and sharp angulation, frictions between the tendon sheath and bony prominence of radial styloid process causing tenosynovitis resulting fibrosis, stenosis, thickening and entrapment in fibroosseous tunnel.

No clicking sound due to absence of catching and giving way as there is no froe and sharp edge of wrist extensor retinaculum.

Middle aged female patients were affected more than five times than those of male probably due to repeated forceful use of hand involving thumb and wrist. Grasping, wringing and supination-
pronation movements of the wrist during house-hold works is in cooking, washing, baby nursing and needle working. One or two injection of methyl prednisolone is less soluble providing local cure the disease, methyl prednisolone is less soluble providing local anti-inflammatory action for prolong period without any recordable side effects in this series. In severe stenosed cases require operative release of the tendons sheath.

Conclusion
de’-Quervain’s disease is a common problem which can be diagnosed easily from the this history and by Finklestein’s test. It can be easily and economically treated by intrathecal infiltration of long acting one or two corticosteroid (methyl prednisolone) 40 mg with 1 .5 ml of 2% xylocain.

References