

## De Quervain's disease – A randomized prospective study evaluating the efficacy of Steroid and Conservative management.

Dr. M. A. Q. Ansari

Associate Professor of Orthopaedics, KBN Institute of Medical Sciences, Gulbarga, RGUHS, India

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**ABSTRACT:** Dequervain's disease is a repetitive stress syndrome which takes a longer time to cure & responds variably to conservative treatment and steroid injection. This study is conducted to evaluate the efficacy of different modalities of treatment in healing this condition. To compare the healing & relief of pain in conservative group treated with analgesics, rest and local application of ointments and steroid group treated with local injection of steroid with a local anesthetic.

**KEYWORDS:** dequervain disease, radial styloiditis, steroid injection, wrist pain.

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### I. INTROCUCTION

It is stenosing tenosynovitis affecting the tendons of abductor pollicis longus and extensor pollicis brevis. Fritz de Quervain, a Swiss surgeon, described it in 1895. It is also called as radial styloiditis. Etiology in most of the cases is idiopathic. Some patients may have anatomical anomalies like aberrant or duplicated tendons or separate compartments for both tendons and variation in insertion of abductor pollicis longus. Some patients may have associated Rheumatoid or Osteo arthritis. Recurrent mild trauma to wrist as in some occupations like typist, mechanics and pregnancy are known predisposing factors for it. Patients usually present with pain at the radial aspect of the wrist. Finkelstein test<sup>1</sup> is usually positive. X-ray of the part is normal. Responds variably to conservative treatment of various modalities, and few may require surgical release.

### II. MATERIALS AND METHODS

A hospital based, prospective randomized study was carried out for a period of six months from October 2013 to March 2014 at KBN Institute of Medical Sciences and Hospital, Gulbarga.

#### 2.1 Source of data:

All the patients presenting with wrist pain & diagnosed to have Dequervain's disease in out patient department of orthopaedics at KBN Institute of Medical Sciences Hospital from October 2013 to March 2014.

#### 2.2 Type of Randomization:

Every alternative cases of Dequervain's disease.

#### 2.3 Inclusion Criteria:

All patients diagnosed to have Dequervain's disease.

#### 2.4 Exclusion Criteria:

- Patients with diabetes.
- Patients with peripheral vascular disease.

#### 2.5 Treatment Modality:

Group I, Conservative group: Patients were advised rest in a splint, NSAIDS and local application of ointment without massage. Group II, Steroid group: Patients were given injection of a steroid like triamcinolone or hydrocortisone mixed with 2% xylocaine into the sheath of the affected tendons, under aseptic conditions.

#### 2.6 Follow up:

At the end of one and two weeks.

### III. RESULTS AND OBSERVATIONS

A total of 46 patients participated in the study, out of which 40 were female and only 6 were male patients. The disease is found to be common in the age group of 30-40 years. Right side is affected more often than the left, mostly due to the reason that most of the people are right handed and tend to use their right hand more than the left. Result evaluation was based on the examination findings at the end of two weeks. It reveals 82% excellent results in group II as compared to 17% in group I. Good results were noted in group II in 17%

while only 13% showed good results in group I. No poor outcome in group II whereas 69% of patients in group I had poor outcome requiring other methods of treatment after 2 weeks of follow-up. Most of these were cured with steroid infiltration after conclusion of the study. Few patients with good results in group II required second injection of steroid for complete relief of pain.

Table 1: Age and Sex distribution of the study population

Age(yrs)	Male (%)	Female (%)	Total (%)
<30	00 (0.0)	06 (13.04)	06 (13.04)
30-39	01 (2.17)	19 (41.31)	20 (43.48)
40-49	03 (6.52)	12 (26.09)	15 (32.61)
≥50	02 (4.35)	03 (6.52)	05 (10.87)
<b>Total</b>	<b>06 (13.04)</b>	<b>40 (86.96%)</b>	<b>46 (100%)</b>

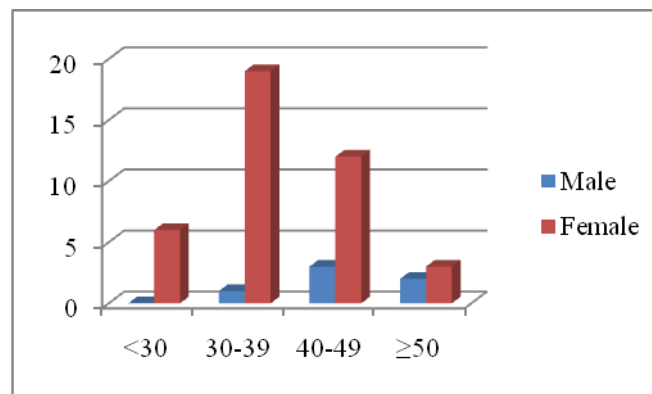


Figure 1: Age and sex distribution

Table 2: Side distribution

Side	Male (%)	Female (%)	Total (%)
<b>Right</b>	04(8.69)	25(54.35)	29(63.04)
<b>Left</b>	02(4.35)	15(32.61)	17(36.96)
<b>Total</b>	<b>06(13.04)</b>	<b>40(86.96)</b>	<b>46(100)</b>

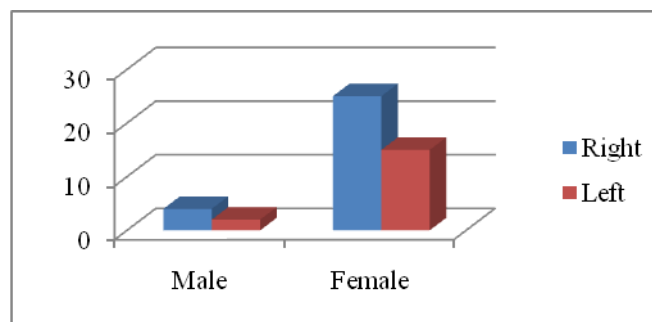


Figure 2: Side distribution

Table 3: Results of both groups compared

Result	Group I No. (%)	Group II No. (%)
<b>Excellent</b>	04 (17.39)	19 (82.61)
<b>Good</b>	03 (13.04)	04 (17.39)
<b>Poor</b>	16 (69.57)	00 (00)
<b>Total</b>	<b>23 (100)</b>	<b>23 (100)</b>

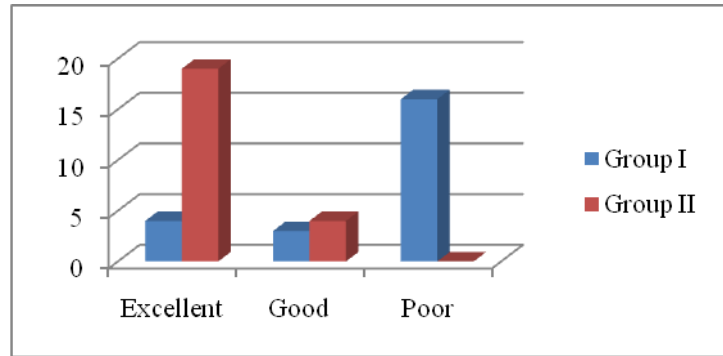


Figure 3: Results in both groups

#### IV. DISCUSSION

Harvey et al<sup>2</sup> in 1990 reported 63 wrists treated with injections of steroids and local anesthetic into tendon sheath. In 45 pain relief was complete, in 7 pain was relieved after second injection and 11 required surgery. Christie<sup>3</sup> in 1955, Lapidus<sup>5</sup> in 1972 and Weiss et al<sup>6</sup> in 1994 reported similar experiences.

#### V. CONCLUSION

Dequervain's disease is a repetitive stress syndrome; It is stenosing tenosynovitis affecting the tendons of abductor pollicis longus and extensor pollicis brevis. It can be concluded from this study that the inflammatory process occurring in this disease can be very effectively controlled and be cured by local infiltration of the steroid into the tendon sheath. The result can be achieved within one or two weeks and is superior to using any kind of analgesics in the form of oral NSAIDS and local ointments and splints.

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