



Efficacy and safety of Aspiration and Steroid Injection in Treatment of Dorsal wrist Ganglion Cyst

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Abstract

Objective: There are several types of treatment modalities for wrist ganglions. The aim of the study was to assess the effectiveness of cyst aspiration and methyl prednisolone acetate injection in dorsal wrist ganglion

Methodology: The present study titled “Efficacy and safety of Aspiration and Steroid Injection in Treatment of Dorsal wrist Ganglion Cyst ” was conducted in postgraduate Department of Orthopaedics, Bone and Joint Hospital Barzulla Srinagar from June 2017 to June 2019. 30 patients with dorsal wrist ganglion of either sex were included in the study.

Results: The study involved 30 patients that received aspiration treatment for dorsal wrist ganglion cysts between June 2017 and June 2019. There were 19 (63.2%) female and 11 (36.8%) male subject with dorsal wrist ganglion cyst. The mean age of patients was 27.63±6.6 years. Recurrence was observed in three (33.3%) patients.

Conclusion: In our study we concluded that aspiration with steroid injection is a useful alternative in treating ganglion wrist, without having a bigger scar to the patient

Keywords: Wrist ganglia, Volar, Aspiration, Corticosteroid injection, Radial artery

Introduction

Ganglion cyst is the most common soft tissue swelling in area around wrist region. It occurs most commonly on the dorsal side of the wrist (70%), followed by volar side (20%) of wrist and tendon sheath of fingers. Majority of patients with ganglion are asymptomatic, except for their presentation with a soft tissue lump, while some patients may present with pain, weakness, or paresthesia¹. Different treatment options have been described in the literature for the management of ganglion. There are certain reports showing spontaneous resolution of ganglion in 40-58% of patients² Arthroscopic resection has the potential advantages of minimizing the surgical scar and permits evaluation of any intra-articular pathologic condition³.

Apart from surgical treatment many conservative treatments have been described in the literature. Sclerotherapy has been proposed to treat ganglion. Since there is communication between ganglion and synovial joint, sclerosant might pass from ganglion to the joint and tendon and cause damage to them. Some advocated the use of hyaluronidase, which depolymerizes the hyaluronic acid present in ganglion content. Immobilization following aspiration had showed conflicting results. A study showed that 3-week immobilization after aspiration and multiple puncture had a significantly higher successful rate for dorsocarpal ganglion⁴. Thread technique is another option for conservative management by which two sutures were passed through the ganglion at right angles to each other, and each was tied in a loop. The contents of ganglion were expelled by massage at interval. The reported recurrence rate is 4.8 %⁵. Aspiration along with steroid injection is one of the simplest ways to treat ganglion..Aspiration is generally performed via single or double sharp pointed needle. Firstly, cyst fluid is aspirated and then steroid is injected into cyst cavity. The recurrence rate of this technique is relatively high as between 59-68% for dorsal ganglion and 88% for volar ganglion⁶. The purpose of this study was to assess the effectiveness of cyst aspiration and methyl prednisolone acetate injection.

Patients and Methods

This prospective study was carried out at postgraduate Department of Orthopaedics, Bone and Joint Hospital Barzulla Srinagar from June 2017 to June 2019. Thirty patients having dorsal wrist ganglions presented to the OPD and treated by one surgeon. There were 19 female and 11 male patients with an average age of 27.6 years. Diagnosis was made on clinical examination, explained to patients about the condition and the patients were

given three options of treatment. Reassurance, Aspiration and steroid injection and Surgery with its associated complications. Those who opted for aspiration and steroid injection were included in the study. The aspiration was carried out under sterile technique, area infiltrated with 1% lignocaine, followed by aspiration of ganglion content using 16 G needle and injection of Methylprednisolone Acetate BP 40 mg/ml. The patients were advised to carry out their normal activities and follow up was done at 6 weeks, 3 months and 6 month.

Results

Out of total 30 patients 19 (63.2%) were female and 11(36.8%) were male patients. The mean age of the patient was 27±6 years. The patients were followed up for a period of 6 months out of total 30 patients 20(66.7%) patients had no recurrence while 10(33.3%) patients had recurrence

Discussion

Wrist region ganglion cyst is the most common benign soft tissue lump, constituting approximately 50-70% of the swellings of the hand and wrist area. Furthermore, the majority of this kind of lumps (60- 70%) were found on the dorsum of the wrist. Different modalities of treatment have been used for the treatment of ganglion cyst that include both surgical and non surgical treatment. The mainstay of surgical treatment remains open ganglionectomy with higher reported recurrence rates attributed to inadequate dissection in which the tortuous duct system located at the joint capsule is not fully excised. Some authors claim recurrence rates for dorsal wrist ganglia as low as 1-5% and 7% for volar wrist ganglia. Aspiration is one of the mainstay of nonsurgical treatment. Studies have shown remarkably variable rates of success. Zubowicz reported 85% success with up to three aspirations. To

improve the success rate of simple aspiration, different additional measures have been introduced previously, Becker, in 1953, introduced steroid injection after aspiration and in 1966, remarkable 86% success rate was reported. Our study showed recurrence rate of 33.3% which falls within the range mentioned literature⁸. The success rate of treating ganglion cyst with aspiration and steroid injection is 66.7% in our study.

Conclusion

In our study we concluded that aspiration with steroid injection is a useful alternative in treating ganglion wrist. As most of the patient in our study were young female and the purpose of treatment was mainly on cosmetic grounds so in comparison with surgical excision which give a bigger scar to the patient, the aspiration and steroid injection can be offered as a useful alternative.

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