

Ganglion Cyst - Best Treatment Option ?



Medical Science

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ABSTRACT

Aim of the study was to know the recurrence rate and complications in different treatment modalities for ganglion cyst. The study was a prospective study conducted on the patients in Department of Surgery, Mathura Das Mathur Hospital, attached to Dr. S.N. Medical College, Jodhpur. Four treatment methods, aspiration, aspiration with triamcinolone injection, aspiration with chromic catgut insertion and surgical excision were included. Recurrence was the most common complication. Recurrence rate was highest in aspiration and least in excision. However further work up is required with a large number of cases and long duration of follow up.

INTRODUCTION

Ganglion cysts are benign soft tissue tumors. A ganglion cyst may encountered in any joint but sixty to seventy percent of ganglion cysts are found in the dorsal aspect of the wrist and communicate with the joint via a pedicle.^{1,2} Although ganglion cysts can be unilobulated, they are most often multilobulated, with septa made from connective tissue separating the lobes or cavities.³

The treatments range from simple observation to aspiration with or without injection of various agents to excision. Recurrence rates have been documented widely, varying from 1 to 42%.¹

MATERIALS AND METHODS

The present study was a prospective study conducted on the patients in Department of Surgery, Mathura Das Mathur Hospital, attached to Dr. S.N. Medical College, Jodhpur. Study was carried out from August 2013 to August 2015. A total of 83 cases were included. Aspiration was carried out under local anaesthesia with aseptic precaution. The contents of ganglion cyst were removed as much as possible with a wide bore needle of size 16 gauge and syringe (10cc). In aspiration with Triamcinolone injection method, Triamcinolone acetate 10%, 2 ml injected into the cyst cavity via previously placed size 24 G hypodermic needle along with aspiration. In aspiration with chromic catgut insertion (Thread technique), two chromic catgut 1/0 sutures were passed through the ganglion cyst at right angles to each other, and each was tied in a loop. In the surgical excision, under standard aseptic precautions, ganglion cyst was excised in operation theatre under local anaesthesia.

RESULTS

The study included 83 patients. Of the total patients, 55 (66.3%) were females and 28 (33.7%) were males. Age varied from 7 to 60 years with mean age of 29.60 years. Swelling was the most common complaint which was present in all patients. Out of 83 patients, swelling was present over dorsal wrist in 57 (68.7%) patients, over volar wrist in 20 (24.09%), over dorsum of foot in 4 (4.81%), and only 2 patients (2.40%) presented with swelling over ankle joint. Duration of swelling was ranged from 1 month to 1.5 years, with a mean of 4.75±2.92 months. Pain was the second most common complaint seen in 29 (34.94%) patients. Weakness of wrist joint was observed in 5 patients (6.02%), tingling sensation in 4 patients (4.82%). Stiffness of wrist joint in 3 (3.61%), restricted movement of wrist joint in 2 patients (2.40%) and numbness in 2 (2.40%) patients.

Out of 83 patients, 16 were treated with aspiration, 25 with aspi-

ration & triamcinolone injection, 29 with aspiration with catgut insertion and surgical excision was done in 13 patients

Out of 83 patients, recurrence was seen in 29 (34.9%) patients after first time treatment. Recurrence was seen in 9 (56.25%) patients after aspiration, in 9 (36.0%) after aspiration with triamcinolone injection, in 9 (31.03%) after aspiration with catgut insertion and in 2 (15.38%) patients after excision. Treatment of recurrence was done with aspiration in 6 patients, aspiration & triamcinolone injection in 10, aspiration with catgut insertion in 8 and excision in 5 patients. Out of 29 patients, second recurrence was developed in 9 (31.03%) patients. Second recurrence was seen in 3 (50.0%) patients after aspiration, in 3 (30.0%) after aspiration with triamcinolone injection, in 2 (25.0%) after aspiration with catgut insertion and in 1 (20.0%) patient after excision.

Post-treatment pain and stiffness of joint was seen in 10 (8.3%) and 7 (5.78%) patients respectively. Pain and stiffness of joint was the common complaint after excision. Other complications were infections seen in 9 (7.43%), numbness in 4 (3.30%), reaction to steroid in 1 (0.82%), bleeding in 1 (0.82%) and scar in 1 (0.82%). Reaction to steroid was seen in 1 (0.82%) patient.

DISCUSSION

The study included 83 patients. Of the total patients, 55 (66.3%) were females and 28 (33.7%) were males. There was female preponderance 1.96:1. Majority of the patients were in the age group of 15 to 40 years. Swelling was the most common complaint which was present in all patients. Dorsal wrist was the most common site followed by volar wrist, dorsum of foot and ankle joint. After explaining the procedure, risk and prognosis of the various types of treatment modalities, aspiration with catgut insertion was most preferred method by the patients and surgical excision was least preferred method.

Recurrence was the most common complication in case of treatment of ganglion cyst by various types of modalities except in excision where stiffness of joint was the most common. First recurrence rates were more than second recurrence rate. So it can be concluded that recurrence rate decrease with repeated procedures.

Other studies suggest that recurrence rate of aspiration alone has 15-67%, aspiration with steroid 15-40%, surgical excision of 20%.⁴ Dias JJ et. al. done a six-year outcome study of the treatment of ganglion cysts on the dorsum (back) of the wrist compared excision, aspiration, and no treatment and observed that neither excision nor aspiration provided long-term benefit

better than no treatment.⁵

Resolution of pain was better in aspiration with triamcinolone injection and aspiration with catgut insertion (p value was 0.0462 and 0.025 respectively) as compared to aspiration alone and excision (p value was 0.414 and p 0.409 respectively). Resolution of pain was least after excision.

Stiffness of joint was more common after excision compared to other procedures. Infection was more common in patients treated with aspiration & catgut insertion. Reaction to steroid was seen in 1 patient treated with aspiration and triamcinolone injection, who presented with dry scaly skin followed by hypopigmentation.

CONCLUSIONS

After explaining the procedure, risk & prognosis of the various types of treatment modalities to the patients, aspiration with catgut insertion was most preferred method by patients and surgical excision was least preferred.

Recurrence was the most common complication. Recurrence rate was highest in aspiration and least in excision. To conclude asymptomatic ganglion may be left untreated as many of them regress spontaneously.

Limited number of cases and short duration of follow up were limitations of the study. Further work up is required with a large number of cases and long duration of follow up.

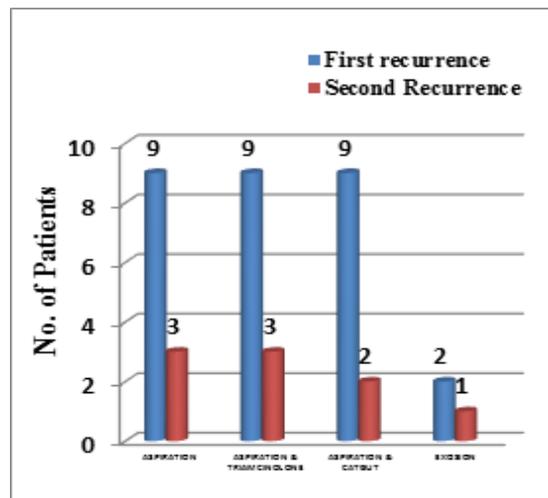


Figure 1. Recurrence after various types of Treatment methods

Table I Complications after various type of Treatment methods

TYPE	Total no. of procedures	Recurrence	Pain	Stiffness	Infection	Numbness	Reaction to steroid	Bleeding	Scar
ASPIRATION	23	12 (52.17%)	02 (8.69%)	01 (4.34%)	01 (4.34%)	00	00	00	00
ASPIRATION & TRIAMCINOLONE	37	12 (32.43%)	02 (5.40%)	01 (2.70%)	02 (5.40%)	01 (2.70%)	01 (2.70%)	00	00
ASPIRATION & CATGUT	40	11 (27.50%)	03 (7.5%)	01 (2.5%)	04 (10%)	01 (2.55)	00	00	00
EXCISION	21	03 (14.28%)	03 (14.28%)	04 (19.04%)	02 (9.52%)	02 (9.52%)	00	01 (4.76%)	01 (4.76%)
Total	121	38 (31.40%)	10 (8.3%)	07 (5.78%)	09 (7.43%)	04 (3.30%)	01 (0.82%)	01 (0.82%)	01 (0.82%)

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