

Comparing Best Treatment Modality for Ganglionic Cyst

Dr. Rajkamal Kanojiya¹, Dr. Rishi Deep Jain², Dr. Rekha Chaudhary³, Dr. Dhruv Sharma⁴

¹Professor & Unit Head, Department of General Surgery, MGMCH, Jaipur

²PG Resident, Department of General Surgery, MGMCH, Jaipur

³PG Resident, Department of General Surgery, MGMCH, Jaipur

⁴PG Resident, Department of General Surgery, MGMCH, Jaipur

Abstract: ***Background:** Ganglion cysts are benign soft tissue tumours. A ganglion cyst may encountered in any joint but 60% - 70% of ganglion cysts are found in the dorsal aspect of the wrist and communicate with the joint via a pedicle.(1,2) Also ganglion cysts can be single lobulated, they are most often multiple lobulated, with septa made from connective tissue separating the lobes .(3) The treatments range from conservative management to aspiration with or without injection of various agents to excision. Recurrence rates have been documented widely, varying from 1 to 40 %. **Aim:** To study the recurrence rate in different modalities of ganglionic cyst treatment. **Methods:** Prospective clinical study analysis of outcome of 80 patients with soft tissue swelling were evaluated on the basis of their surgical management or catgut insertion. **Results:** Recurrence rate was highest in aspiration and lowest in catgut insertion. **Conclusion:** To conclude asymptomatic ganglion may be left untreated as many of them regress spontaneously and catgut can be used for management*

Keywords: ganglion cysts, recurrence rate, treatment modalities, aspiration, catgut insertion

1. Introduction

Ganglion cysts are benign soft tissue tumours. A ganglion cyst may encountered in any joint but 60% - 70% of ganglion cysts are found in the dorsal aspect of the wrist and communicate with the joint via a pedicle.1,2 Also ganglion cysts can be single or multiple lobulated, with septa made from connective tissue separating the lobes .3 The treatments range from conservative management to aspiration with or without injection of various agents to excision. Recurrence rates have been documented widely, varying from 1 to 40 %.

2. Materials and Methods

The present study was a prospective study conducted on the patients in Department of Surgery, Mahatma Gandhi Medical College, Jaipur. Study was carried out from February 2022 to February 2023. A total of 80 cases were included. Aspiration was carried out under local anaesthesia with aseptic precaution. Patients were divided into Group A, Group B, Group C and Group D by lottery method. The contents of ganglion cyst were evacuated as much as possible with a wide bore needle of size 16 gauge and syringe (10cc). In aspiration with Triamcinolone injection method, Triamcinolone acetone 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, 2 chromic catgut 1-0 sutures were passed via the ganglion cyst at right angles to each other, and each was tied in a loop. In the surgical excision, under known aseptic precautions, ganglion cyst was excised in operation theatre under local anaesthesia.

Inclusion criteria

All patients between 18 years to 60 years of age with clinically proven ganglionic cyst were included in the study.

Exclusion criteria

All the patients with age ≤ 18 year's age and more than 60, patients Patient with comorbidities like Diabetes and Hypertension

3. Results

The study included 80 patients. Of the total patients, 50 were females and 30 were males. Age varied from 18 to 60 years. Swelling with pain was the most common complaint which was present in all patients. Out of 80 patients, swelling was present over dorsal wrist in 43 patients and over volar wrist in 37, Duration of swelling was ranged from 1 month to 1 years, Weakness of wrist joint was observed in 15 patients, tingling sensation in 14 patients. Stiffness of wrist joint in 12, restricted movement of wrist joint in 12 patients and numbness in 3 patients. Out of 80 patients, 20 were treated with aspiration, 20 with aspiration & triamcinolone injection, 20 with aspiration with catgut insertion and surgical excision was done in 20 patients Out of 80 patients, recurrence was seen in 37 patients after first time treatment. Recurrence was seen in 13 patients after aspiration, in 13 after aspiration with triamcinolone injection, in 6 after aspiration with catgut insertion and in 8 patients after excision.

Post-treatment pain and stiffness of joint was seen in 24 and 12 patients respectively. Pain and stiffness of joint was the common complaint after Aspiration with triamcinolone. Other complications were infections seen in 8, numbness in 3, reaction to steroid in 3, bleeding in 5 and scar in 10. Reaction to steroid was seen in 3 patient.

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Type	Total no. of proced URES	Pain	Stiffness	Infection	Numbness	Reaction of steroid	Bleeding	SCAR	Recurrence
Aspiration	20	7	3	0	0	0	0	0	13
Aspiration and Triamcino Lone	20	8	4	2	1	3	0	0	10
Aspiration and Catgut	20	5	4	4	2	0	0	3	6
Excision	20	4	1	2	0	0	5	7	8
Total	80	24	12	8	3	3	5	10	37

4. Discussion

The study included 80 patients. Of the total patients, 50 were females and 30 were males.

Ganglion cysts are synovial cysts **filled with a gelatinous mucinous substance** that are **common** in orthopedic practice. Although the exact **cause for** the development of ganglion cysts is unknown, they are **thought to result** from repetitive **strain injuries which lead to** degeneration of **mucus in the** connective tissue. **Most people with a lymph node** have **no symptoms other than** swelling, while others may **experience** pain, weakness, or pares thesia. They are the most common soft tissue **masses in the hands and wrists**, but they are also **common** in the **knees and feet**. Although **most** ganglion cysts are asymptomatic, patients may **experience** pain, tenderness, weakness, and dissatisfaction with **their appearance**. **Most people with a lymph node** have **no symptoms other than** swelling, while others may **experience** pain, weakness, or paresthesia. Many **people** may **choose no** treatment if they are **convinced that the disease is mild**. Also, even **with** painful **nodes**, they cause less pain **than** other common **orthopedic problems such as** carpal tunnel syndrome and osteoarthritis, Swelling with pain was the most common complaint which was present in all patients. Dorsal wrist was the most common site followed by ventral wrist.

After explaining the procedure, risk and prognosis of the various types of treatment modalities, aspiration and 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 catgut insertion where pain was the most common. 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 excision as compared to other treatment modalities. Resolution of pain was least after aspiration with triamcinolone injection. Stiffness of joint was more common after aspiration with triamcinolone & aspiration with catgut insertion compared to other procedures. Infection was more common in patients treated with aspiration & catgut insertion. Reaction to steroid was seen in 3 patient treated with aspiration and triamcinolone injection, who presented with dry scaly skin followed by hypopigmentation.

5. Conclusion

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 aspiration with catgut insertion. To conclude best treatment modality for ganglionic cyst is aspiration with catgut insertion. Limited number of cases and short duration of follow up were limitations of the study.

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