

## An Unusual Presentation of Ganglion Cyst

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### Abstract

One of the common soft-tissue swellings of the hand and wrist are the ganglion cysts. Though its etiology is not very well understood, the blame is borne by mucoid degeneration. Total excision of the cyst with its pedicle and a pinch of adjacent joint capsule reduces the risk for recurrence. In this case report, we have thrown light on an unusual presentation of ganglion cyst.

**Keywords:** Ganglion Cyst; Surgical Excision; Flexor Tendon Sheaths

### Introduction

Ganglion cyst compromise about 50% to 70% of all hand and wrist masses [1]. They are most prevalent during 20 to 40 years of life. The cysts are 3 times more common in women than men [1]. Surgical excision is the treatment of choice in most of the cases. Ganglions are firm or rubbery, non-adherent to the skin, and are 1 to 3 cm in size [2]. On palpation, they are non-tender. The terminal movements at wrist produces pain, which is usually dull and persistent. Smaller ganglions tend to be more painful than the larger ones [3].

Ganglion cysts are often present in the dorsum of the wrist and at the volar aspect of the wrist. They are also prevalent in the flexor tendon sheaths. They are termed as mucous cysts, when located at the distal interphalangeal (DIP) joints [2,5]. Patients who were asymptomatic for longer period can present with pain or restriction of movements.

### Case Report

A 32-year IT professional came to the OPD with complaints of swelling over volar aspect of right wrist and dorsal aspect of left wrist for past one year.

History of recurrent aspiration done elsewhere. There was no history of pain. Patient reported a history of reduction in activity and did not report any history of trauma.

On examination, both swellings were firm in consistency, fluctuant with positive transillumination.

Xray Wrist was taken to rule out bony involvement.

Considering its anatomical location and distinctive clinical features, it was diagnosed as bilateral recurrent wrist ganglion. The need for surgical excision was explained to the patient.

Under wrist block, the dorsal ganglion was excised first. A transverse incision was made, centering the ganglion cyst. The cyst, its pedicle and its capsular attachments were excised. Then, the ganglion cyst at the volar side was reached with a longitudinally oriented incision curving around the radial side of the ganglion cyst. The incision was carefully made so that the proximal and distal capsular attachments were also reached.

Care was taken to avoid rupturing the cyst because that could make identification and complete excision of the pedicle and capsular attachments more difficult.

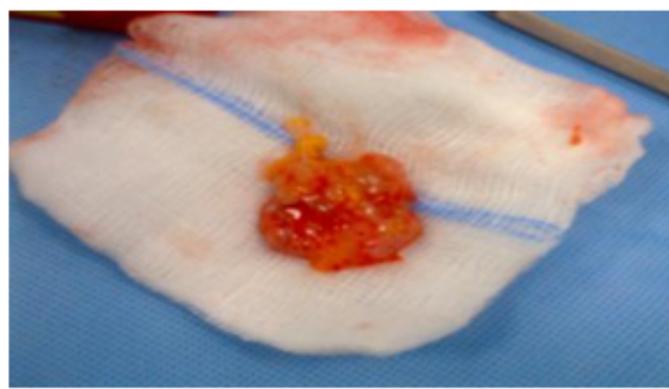
Meticulous hemo-stasis was obtained. Closure was done with 3-0 ethilon. Active finger movements checked. A fluffy bandage-dressing was applied. Early mobilization was advised.



**Figure 1:** The ganglion in the volar side of right wrist.



**Figure 2:** The ganglion in the dorsal side of left wrist.



**Figure 3:** Contents after excision.

### Discussion

The dorsum of the wrist is the common location of ganglion formation, accounting for 60% to 70% of all hand and wrist ganglion cysts [1]. They can even appear between the long thumb extensor laterally and the common finger extensors medially. The main body of the cyst is hitched to the wrist capsule by a pedicle. This pedicle often penetrates the capsule and establishes contact with the scapholunate ligament.

Volar wrist ganglion cysts account for 18% to 20% of all ganglion cysts of the hand and wrist [1]. They generally occur under the volar wrist crease, just radial to the flexor carpi radialis tendon. Volar ganglion cysts arise most frequently from the radio-carpal joint or the scaphotrapezium joint [5].

Volar wrist ganglion cysts can be quite extensive, tracking under the thenar muscles, into the carpal canal, or along the flexor carpi radialis tendon. Adherence to the radial artery is found to be common.

The indications for treatment include pain, weakness, and cosmesis. Asymptomatic patients often require reassurance that the ganglion cyst is not malignant, and the cyst may occasionally regress by itself.

While symptomatic cysts, can be treated conservatively. Aspiration of the cyst with a large bore needle followed by injection with lignocaine and a corticosteroid. 80% of dorsal wrist ganglions usually settle down but can recur anytime later. Volar wrist ganglion cysts generally do not respond to nonsurgical treatment. Other nonsurgical modes practised include heat, radiation, and injection with sclerosing agents. These methods have been shown to be ineffective.

Due to failure of conservative treatment, surgery becomes the treatment of choice. Ganglion cyst excision generally takes place as an outpatient procedure.

### Conclusion

Not all ganglions are painful. In this patient, there was limitation in activity only. Patient did not have pain. He had cosmetic concerns. Although the etiology of the ganglion cyst remains unclear, surgical excision is the best treatment available if the conservative treatment fails. Excising the cyst, its pedicle, and a portion of the capsule greatly diminishes the risk for recurrence.

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