



Case Report

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Bilateral ganglion of wrist: management still a dilemma

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Abstract

Ganglion is a commonest cystic swelling of hand and most common site is dorsum of hand i.e. about 60-70%. It can occur at any age but more common between twenties to forty years age. Its origin and pathogenesis are still unclear. There are many non-surgical methods of treatment but are associated with high recurrence rate. Surgical excision is final treatment but may result in unsightly scar and keloid. Arthroscopy excision is new technique for communicating ganglion with very low recurrence rate. Pathogenesis is still a mystery so there is a management dilemma. We, hereby, report a rare case of bilateral ganglion on dorsum of both wrists along with review of current literature.

Keywords: Ganglion cyst, Wrist, Arthroscopy.

INTRODUCTION

Ganglion cysts can affect any body joint but most commonly occurs on dorsum of the wrist. More common between 20-40 years age group but may affect any age. The pathogenesis is unclear still history of trauma is present in 10% of cases. Incidence in females is twice than male. 19% of patients presented with wrist pain where as 51% were asymptomatic [1]. Main site of ganglions is dorsum of wrist (60-70%) but can occur on ventral aspect also. Mostly are noncommunicative type but may communicate with joint via a pedicle. This pedicle originates commonly at the scapholunate ligament [2]. A few may arise on ventral aspect via a pedicle from radio scaphoid-scapholunate interval, scaphotrapezium joint, or metacarpotrapezium joint [3]. Ganglion can arise from flexor tendon sheath in the hand is about 10% of cases [4]. Pathogenesis of ganglion is unclear so far. One of the theories is that the cyst is a simple herniation of the joint capsule, then cyst should be lined by synovial lining which is missing in the cyst wall. Another theory of inflammatory aetiology has been is also doubtful as there are no pericystic inflammatory changes [5-7].

CASE REPORT

A young man 30 years, presented in surgical OPD with cystic swellings on dorsum of both hands for the last one year. Swelling of right started earlier than left hand [Fig-1]. Patient complained of pain in wrist also radiated up the patient's arm. Pain was more with activity or by pressure on the cyst. On examination, wrist ganglion was of 2x2 cm in size, cystic in consistency and were attached to tendon sheath. There were no associated signs of inflammation like warmth or erythema. There was decreased range of motion and decrease grip strength. Patient reported due to pain while manual labour as he is a manual worker. Excision of both ganglions was done, first of left hand and then right hand after six weeks. Patient was followed up to six months without recurrence.

DISCUSSION

Ganglion cysts can affect any body joint but most commonly occurs on dorsum of the wrist. More common between 20-40 years age group but may affect any age. The pathogenesis is unclear still history of trauma is present in 10% of cases. Incidence in females is twice than male. 19% of patients presented with wrist pain where as 51% were asymptomatic [1]. Main site of ganglions is dorsum of wrist (60-70%) but can occur on ventral aspect also. Mostly are noncommunicative type but may communicate with joint via a pedicle. This pedicle originates commonly at the scapholunate ligament [2]. A few may arise on ventral aspect via a pedicle from radio scaphoid-scapholunate interval, scaphotrapezium joint, or

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A new arthroscopic classification of ganglia is as follow: -

- Type 1 ganglia and their stalks were visible;
- Type2a ganglia or their stalks ballooned into the wrist joint with external compression;
- Type 2b ganglia or their stalks could not be identified in the wrist joint, even with external compression [12].

Main presenting symptoms are swelling and pain. Pain may be localised or may rarely radiate to upper arm. Pain is more on pressure on swelling or heavy work. It can result in decreased grip strength. The dorsal wrist ganglion is most easily palpated in a position of volar flexion. Patients seek treatment when there is an increase in size. The cause of pain is unknown but, in the case of dorsal ganglia, it may be due to compression of the terminal branches of the posterior interosseus nerve [13].

The clinical picture is sufficient to diagnose except in the case of "occult wrist ganglion" In such cases ultrasound and MRI are needed to make a diagnosis.

Various non-surgical methods used for management of ganglion included the closed rupture of ganglion with digital pressure or a book, aspiration, aspiration with steroid instillation, aspiration with sclerosing agent instillation, aspiration with hyaluronidase instillation, aspiration with multiple puncture of ganglion wall, aspiration with splinting with a thick thread through ganglion to create inflammation. But all these methods had a high recurrence rate.

Surgical excision remains the gold standard for treatment of ganglion cysts. With the excision of the entire ganglion complex, including cyst, pedicle, and a cuff of the adjacent joint capsule, recurrence rates have dropped and it is as low as 1–5% and as low as 7% for volar wrist ganglia [14]. Surgical treatment is not a panacea as it has got many complications incidence up to 20%. Complications include postoperative stiffness, grip weakness, decreased range of motion, infection, neuroma, unsightly scar, and keloid. Damage to the palmar cutaneous branch of the median nerve and radial artery are at risk during surgery for volar ganglia. Another point against surgery is cosmetic concerns particularly in female patients. Benign nature of ganglion and its natural history of regression also lower patient's wish for surgery [15].

Arthroscopic excision is good in case of occult dorsal ganglion as with the help of arthroscope, the ganglion can be excised from inside out and there is minimum dissection and thus minimum scarring postoperatively. In open excision of occult dorsal ganglia, there is extensive amount of blunt dissection to localize and to identify the ganglion. This blunt dissection may result in increased scarring and decreased flexion. Arthroscopy is costly and is not useful in simple dorsal ganglions which can be managed with simple excision [14-16]. Our case was treated with bilateral excision of ganglion with no recurrence up to 6 months.



Figure 1: Photo of patient showing ganglion on dorsum of both wrists

CONCLUSION

The pathogenesis of ganglion is still a mystery even today so there is a management dilemma. Aspiration of gelatinous material from cyst and installation sclerosant in cyst have poor result. Treatment of choice is surgery with scar and keloid in few cases. The scar of surgical excision can be avoided with the help of arthroscopy. The arthroscopy is useful in the management of communicative wrist ganglion. Arthroscopy has a very promising future.

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