

ORTHOPAEDICS



FOR PRIMARY
HEALTH CARE



LION

LEARNING INNOVATION VIA
ORTHOPAEDIC NETWORKS

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Wrist ganglions

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Learning objectives

1. A ganglion is a benign mass.
2. They are usually pain free, but occasionally cause discomfort or pain.
3. The diagnosis is clinical.
4. If you are not certain of the diagnosis, rather refer or send for further investigations.

Definition

A ganglion is a fluid filled sac whose wall is made up of a lining that has no cells. It usually originates from a joint.

Background

Wrist ganglions are common, occurring predominantly on the dorsum of the wrist. They vary in size. They may also wax and wane (get bigger and then smaller again). They have been described originating from every joint in the hand, but the most common origin is from the dorsal scapholunate joint.

They may occur volarly where they usually originate from the radiocarpal joint. These are often intimately related to the radial artery.

Diagnosis

The diagnosis is mainly a clinical one.

History

A typical history is of a non-painful mass which may increase and decrease in size over time. Occult ganglions on the dorsum of the wrist are small and usually present with pain on wrist extension. They are

usually not visible due to their small size. Pain is due to impingement or posterior interosseus nerve irritation.

Examination

The mass is well defined, fluctuant, non-tender and trans-illuminates. Flexion of the wrist can sometimes unmask a small dorsal wrist ganglion. Wrist movement should be checked and compared to the opposite side. Extension may be slightly decreased depending on the size of the ganglion, but flexion is usually normal.

Special investigations

Investigations are usually unnecessary but, if there is doubt about the diagnosis, an ultrasound or MRI may be performed.

Classification

The classification is based on location - either dorsal or volar.

Management

Dorsal ganglions

No treatment is required as ganglions often resolve on their own and are usually asymptomatic except for the cosmetic aspect. Aspiration may be attempted but

the recurrence rate is high. Surgical excision may be done but there is a recurrence rate of around 5%.

Volar ganglions

Again, usually no treatment is required. Aspiration should not be attempted due to the risk of injury to the radial artery. The recurrence rate after excision is about 10%.

Complications

- Recurrence
- Infection
- Scarring
- Tendon and arterial injury

Pitfalls

- If uncertain of the diagnosis, MRI or ultrasound should be performed

References

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Miller MD; 2008; Review of Orthopaedics, 5th edition; Elsevier; Philadelphia, USA.

Wolfe SW, Hotchkiss RN, Pederson WC, Kozin SH, Cohen MS; 2017; Green's Operative Hand Surgery, 7th Edition; Elsevier; Philadelphia, USA.

Assessment

A 22-year-old female patient presents with a mass on the dorsum of the wrist that has been there for years, without a history of trauma. Since starting CrossFit, it causes discomfort when she does press-ups. Your most likely diagnosis is:

- A. Scapholunate interosseus ligament tear
- B. Scaphoid fracture
- C. Osteochondroma
- D. Giant cell tumour
- E. Dorsal wrist ganglion

The correct answer is (E), dorsal wrist ganglion.

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ABOUT THE BOOK

Informed by experts: Most patients with orthopaedic pathology in low to middle-income countries are treated by non-specialists. This book was based on a modified Delphi consensus study* with experts from Africa, Europe, and North America to provide guidance to these health care workers. Knowledge topics, skills, and cases concerning orthopaedic trauma and infection were prioritised. Acute primary care for fractures and dislocations ranked high.

Furthermore, the diagnosis and the treatment of conditions not requiring specialist referral were prioritised.

* Held et al. Topics, Skills, and Cases for an Undergraduate Musculoskeletal Curriculum in Southern Africa: A Consensus from Local and International Experts. JBJS. 2020 Feb 5;102(3):e10.

THE LION

The Learning Innovation via Orthopaedic Network (LION) aims to improve learning and teaching in orthopaedics in Southern Africa and around the world. These authors have contributed the individual chapters and are mostly orthopaedic surgeons and trainees in Southern Africa who have experience with local orthopaedic pathology and treatment modalities but also in medical education of undergraduate students and primary care physicians. To centre this book around our students, iterative rounds of revising and updating the individual chapters are ongoing, to eliminate expert blind spots and create transformation of knowledge.

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This textbook is not intended as a substitute for the medical advice of physicians. The reader should regularly consult a physician in matters relating to his/her health and particularly with respect to any symptoms that may require diagnosis or medical attention.

The information in this book is meant to supplement, not replace, Orthopaedic primary care training. The authors, editor and publisher advise readers to take full responsibility for their safety and know their limits. Before practicing the skills described in this book, be sure that your equipment is well maintained, and do not take risks beyond your level of experience, aptitude, training, and comfort level.

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