

THE HAND PATIENT

A Selection of Case Studies for Quick Reference

Having had the pleasure to teach and train students for many years, and the privilege of having patients referred to me by ex-student General Practitioners, one realizes that medical school training can only impart but a general overview of knowledge. It is impossible and unfair to expect of any medical student to "know it all".

For this reason continuing medical education, or Continuing Professional Development (CPD) as it is now known in South Africa, is imperative.

This post-graduate training should however, be presented in such a way that the busy practitioner readily has access to the relevant information in a succinct form and in an understandable jargon.

Communication between the referring doctor and the specialist should not only include information regarding that particular patient, but should also contain some informative detail on the pathology and management.

This continuing education is part of the responsibilities of a consultant specialist.

It is sincerely hoped that this edited collection of selected case reports will promote a well-informed communication between the practitioner and his/her "hand patient".

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DORSAL GANGLION OF THE WRIST

Dear Colleague,

Re: Your patient with a swelling on the dorsal aspect of her left wrist

Thank you for your referral of Ms. H an 18 year old right hand dominant learner preparing for her matric examinations. She has been complaining of a swelling on the dorsal aspect of her left wrist which has gradually increased in size. Initially she complained of constant pain in the wrist. This pain is worse when she dorsi-flexes or palmar-flexes her wrist. She could not do her exercises at the gym without pain. Recently the swelling has become very hard. Interestingly enough the pain has decreased but she is concerned about the cosmetic appearance of the swelling and obviously the cause of the tumour. There is no history of injury.

On examination one notices a one and a half by one and a half "centimeter" hard swelling over the dorsal aspect of the left wrist. The swelling overlies the scapho-lunate joint. It is not tender on direct palpation however "dorsi-flexion" of the wrist or "palmar-flexion" of the wrist does elicit the typical pain that she has been complaining about. Tapping the area just proximal to the swelling elicits a sharp stab-like pain. She also has a tender area to tapping distal to the ganglion. The neurovascular examination of the hand is within normal limits.

The special investigations included only plain x-rays of both hands including the wrists. No abnormalities could be seen although on the lateral view of the left hand one could see soft tissue swelling over the lunate and an uneven unclear cortex of the dorsal aspect of a capitate.

The diagnosis is a Dorsal Ganglion of the wrist. The differential diagnosis should include amongst others synovitis due to rheumatoid arthritis, a lipoma, non-specific synovitis of the extensor tendons, second muscle belly of the extensor indices proprius and on rare occasions an atavistic short extensor of the fingers (Extensor digitorum brevis manus).

The management could be conservative. The ganglion could be aspirated immediately confirming the diagnosis by the aspirate which is a jelly-like fluid. One would also attempt to poke a few holes in the wall of the ganglion to encourage drainage of the ganglion. However the patient should be warned that 70 – 80 % of ganglions might return because of a connecting pedicle to the wrist joint at the scaphoid-lunate joint. My argument is that 20 % of patients will therefore not need any surgery. This

will also save them from having a scar on the dorsum of their hand.

However in those 80 % of cases where the ganglion may return an excision is indicated. My personal preference is to make a transverse incision over the scapho-lunate area. The ganglion is excised making absolutely sure that the pedicle is followed into the capsule. The pedicle always pierces the capsule at the scapho-lunate joint. It is also advisable that a one-centimeter square portion of the dorsal capsule be completely removed. Often times one can see small "embryonic" ganglia within the capsule which cause the dorsal ganglion to recur. I then proceed to explore the dorsal aspect of the capitate which in almost all cases has an inflamed erosion, often times involving the dorsal aspect of the scaphoid. Synovitis is a hallmark of this erosion. I use a small spoon to curettage this area.

I then find the posterior interosseus nerve which usually lies in the corner between extensor pollicis longus and the dorsal aspect of the radius. I get hold of the nerve with an artery

forceps and gently pull distally to avulse the nerve. This is done to prevent neuromalformation of the nerve in the operation area which is a cause for constant pain post-operatively. We have not seen any detrimental effect from avulsing this nerve. The skin is closed with absorbable suture preferably subcutaneous, to enable a neat scar. The patient gets a volar splint for five days only after which she is encouraged to move the hand an wrist freely. Two weeks after surgery she should commence with scar massaging to prevent adhesions between the skin and deeper structures.

Discussion

The dorsal ganglion of the wrist is a benign swelling of unknown origin. It is lined by flattened epithelial cells. The jelly-like fluid inside the ganglion does not resemble the fluid of the joint although a direct connection often exists. These dorsal ganglions occur usually in females between 16 and 36 years of age. In a recent series we have shown that the erosion of the capitate is part of the pathology and in many cases it may

be the beginning of pain on the dorsal aspect in young females. One has seen many so called unexplainable pains of wrists in young females which eventually turn out to become dorsal ganglions. In another series we have shown that it is advisable to examine the ganglion histologically. In a small percentage of cases we have found other pathology than the "obvious" dorsal ganglion. These included rheumatoid arthritis and even tuberculosis. Post-op splinting should not proceed beyond five days. Stiffness will definitely be a complication with long term splinting. If the dorsal ganglion is removed in this "radical" way as is described above the recurrence rate is less than 0.1 %. If the ganglion is only removed without excising part of the capsule, the recurrence rate can be as high as 30 %. Sometimes one may find synovitis of the extensor tendons which could be removed at the same sitting. This may be due to an irritation but the etiology is not always clear.

With sincere regards,

Ulrich Mennen



Legend:

The dorsal ganglion could be of any size, often changing size when the connecting pedicle with the scapho-lunate joint of the wrist is still patent. The differential diagnosis should include synovitis of the extensor tendons, synovitis of the wrist joint, gout and foreign body reaction.