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PRACTICE

10-MINUTE CONSULTATION

# Pain at the base of the thumb

David Robin Dickson *orthopaedic registrar*[1], Claire C L Dickson *general practitioner*[2], Robert Farnell *consultant hand and wrist surgeon*[1]

[1]Hand Unit, Leeds General Infirmary, Leeds LS1 3EX, UK; [2]Wetherby Surgery, Wetherby, UK

This is part of a series of occasional articles on common problems in primary care. *The BMJ* welcomes contributions from GPs.

A woman in her 60s presents with progressive pain at the base of her thumb, which is exacerbated by writing, lifting pans, and turning door handles.

## What you should cover

Osteoarthritis at the base of the thumb (the carpometacarpal joint) is common, usually idiopathic, and mostly affects postmenopausal women. The joint is subjected to considerable forces, particularly during pinching and gripping, making it prone to osteoarthritis.

Take a focused pain history:

- Site: typically spread over a broad area around the base of thumb.
- Onset: pain has usually progressed over a long period.
- Exacerbating factors: activities requiring thumb pinch with twisting such as opening jars and doors, turning keys, and lifting pans.
- Severity and effect on activities of daily living: ascertain the impact on the patient's function, quality of life, occupation, mood, relationships, and leisure activities.[1]

## Alternative or concomitant diagnoses to consider

- Carpal tunnel syndrome (usually idiopathic but can be associated with basal thumb arthritis owing to compression of the median nerve by bony spurs and synovitis in the carpal tunnel): numbness in the hand, particularly at night, and in the thumb, index, middle, or radial half of the ring finger (median nerve distribution).
- Trigger thumb (differential diagnosis): patients often present with pain and a palpable nodule over the palmar aspect of the metacarpophalangeal joint, with clicking on flexing the thumb.
- De Quervain's tenosynovitis (a differential diagnosis, with pain from irritation of two thumb tendons where they run through a fibrous sheath): pain is typically over the radial styloid rather than the base of the thumb.
- Other diagnoses: atypical features such as a history of trauma may suggest a fracture; prolonged morning stiffness is typical of an inflammatory arthropathy; rapidly worsening symptoms with severe pain and swelling may indicate cancer; and a hot swollen joint points towards a septic joint or gout.

## What you should do

### Examination

- Look (see figure⇓):

  -The thumb is usually held in an adducted position. There may be compensatory hyperextension of the metacarpophalangeal joint

  -The thenar eminence may be wasted, either from disuse or carpal tunnel syndrome.
- Feel: the carpometacarpal joint should be tender to palpate.
- Movement: movement of the carpometacarpal joint and the "grind test" should reproduce pain. This test loads the base of the thumb by applying pressure towards the wrist joint and twisting.
- Assess for other diagnoses—for example:

  -Carpal tunnel syndrome: altered sensation to light touch in the median nerve distribution and reproduction of symptoms by tapping over the nerve (Tinel's test) or direct pressure (Durkan's test). The nerve lies in the proximal palm between the thenar and hypothenar eminences in line with the webspace between the middle and ring fingers.

  -Trigger thumb: tenderness and a palpable nodule over the palmar metacarpophalangeal joint, clicking on thumb flexion

Correspondence to: D R Dickson davidrdickson@hotmail.com

**The bottom line**

- Encourage patients to self manage the condition with simple analgesics, joint protection, and activity modification
- Refer patients with a history or recent trauma or a red hot swollen joint for an urgent orthopaedic opinion

-De Quervain's tenosynovitis: tenderness over the radial styloid.

## Investigations

- Osteoarthritis can be diagnosed without investigations in patients aged over 45 years who have activity related joint pain and no more than 30 minutes of morning stiffness.[1]
- Radiological imaging may be helpful if the diagnosis is in doubt or other conditions, such as a fracture, are suspected.
- Similarly, investigations for carpal tunnel syndrome, De Quervain's tenosynovitis, or trigger thumb are not needed routinely.

## Treatment options

Encourage and support self management by patients.[1] Explain to the patient that this is a common condition of wear and tear of the thumb joint that can usually be treated with painkillers and simple adjustments to normal activities, although some people will require more specialist treatment from hand surgeons. Patient information sheets on an array of hand conditions can be found and downloaded for free from the British Society for Surgery of the Hand website (www.bssh.ac.uk). Many respond to non-operative measures:

- Approaches to joint protection[2]:
  -Avoid repetitive thumb movements
  -Avoid prolonged gripping
  -Avoid heavy objects
  -Use as large a grip as possible.
  -Use assistive devices for specific activity problems.[1] These include electric potato peelers and devices to remove jar lids. These reduce the repetitive high loads to the thumb joint and thus reduce the pain caused by these activities.
  -Use splints to reduce the load and ease pain.
  -A trained hand therapist may be beneficial both in patient education and exercises.
- Analgesia[1]:
  -Paracetamol and topical non-steroidal anti-inflammatory drugs (NSAIDs) are first line analgesics
  -When paracetamol and topical NSAIDs prove ineffective, consider oral NSAIDs. Because of the risk of side effects, these drugs should be used at the lowest effective dose for the shortest possible time
  -Use topical capsaicin as an adjunct
- Steroid injections provide at least short term benefit in 76% of patients,[3] so consider as an adjunct to non-operative management in patients with moderate to severe pain.[1] Referral to a hand surgeon may be needed for this.

A combination of hand therapy, splints, and simple analgesics removed 70% of patients from a waiting list for surgery.[4]

Refer patients for surgery only after they have been offered and remain refractory to non-surgical treatment.[1] The mainstay of operative treatment is excision of the trapezium, although joint fusion is often preferred in young labourers.

An article published in *The BMJ* in 2011 provides further information.[5]

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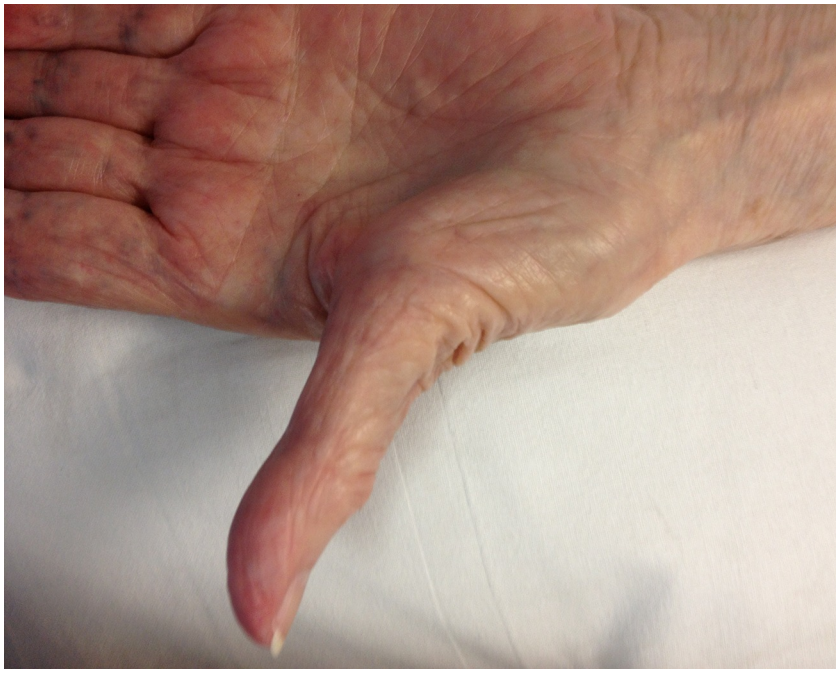
## Figure



Typical thumb with basal osteoarthritis