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# Management of Chronic Elbow Pain

**Patients presenting with elbow pain can pose a diagnostic challenge, especially if there is no obvious recent injury associated with it. Here I will cover some of the common (and not-so-common!) conditions and how to manage them.**

I often look at the age and occupation of the patient as a starting point. Younger patients tend to have more soft tissue abnormalities, with joint degeneration being commoner in the older patient.

## **Some of the diagnoses to consider in the under-40 age group are:**

- Tennis/golfer's elbow
- Loose bodies
- Cartilage defects
- Ligamentous instability
- Intra-articular plicae
- Distal biceps chronic/partial injury and bursitis
- Olecranon bursitis
- Ulnar neuritis
- PIN syndrome
- Congenital abnormalities

## **In the age group over 40, things to consider are:**

- Tennis/golfer's elbow
- PIN syndrome
- Loose bodies
- Olecranon spurs and bursitis
- Osteoarthritis
- Rheumatoid or other inflammatory arthropathy
- Charcot joint
- Ulnar neuritis

## **Symptoms to look for include:**

- Pain
- Locking
- Stiffness
- Reduced range of movement

## **When examining the patient it is useful to note:**

- Total arc of movement as well as specifically restricted flexion or extension
- Generalised or local swelling
- Change in temperature or skin changes
- Crepitus
- Clicking or suggestion of joint subluxation and reduction

*Synovial Plicae*



Fig. 3

## Examination Techniques

Elbow range of movement is very simple to measure, but is best done with the arms abducted so the elbow is at eye level and subtle differences in flexion/extension can be noted. This assumes, of course, good shoulder movement. Otherwise looking at the patient from the side with their elbows by their side gives a good estimate. This position is also the best way to assess pronation and supination as it eliminates trick shoulder movements.

Instability tests can be tricky to perform accurately; the simplest way of identifying subtle instability is to ask the patient to push up out of an armchair. This subluxes the elbow if it is unstable, and may provoke the pain/instability the patient is complaining of.

## Tennis/Golfer's Elbow

Tennis (lateral) and golfer's (medial) epicondylitis are very common conditions. They produce localized pain which can be provoked by resisted middle finger extension (tennis elbow) or resisted wrist flexion (golfer's elbow) with the elbow extended, and is classed as severe if this provokes pain even with the elbow flexed.

Most cases resolve with rest/ice/anti-inflammatories. The next stage is to consider physiotherapy for stretching and eccentric strengthening exercises, followed by steroid injection if symptoms continue. I prefer autologous blood injections if there is still no significant improvement, and surgery should be left as a last resort (ref 1).

**FACT**

*Most cases resolve with rest/ice/anti-inflammatories.*



Fig. 2



*osteochondral defects*



Fig. 1

## Loose Bodies

Mild trauma or repetitive use can cause an inflammatory reaction to debris/synovium within the elbow resulting in calcified masses. While usually attached to the synovium, they can also detach and float around the elbow (fig 1). The classically cause intermittent clicking or 'catching' sensations but not usually any significant rest pain.

They may vary in size, and if affecting function they may need surgical excision. I usually excise these arthroscopically, and even large masses can usually be broken down and excised arthroscopically. Occasionally open excision is needed. There is a chance that loose bodies may re-form.

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*There is a chance that loose bodies may re-form.*  
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Fig. 6

## Isolated Cartilage Defects & Plicae

Elbow pain may be caused by localised degeneration or cartilage defects such as osteochondritis dissecans. This can classically occur in the radiocapitellar joint, which is hard to visualise on plain x-rays.

A CT or MRI scan (fig 2) may be needed to fully appreciate a small defect. Classical symptoms include clicking, grinding sensations particularly in pronation and supination while gripping, which loads the radiocapitellar joint. There may be loss of extension

Small areas of degeneration usually settle with conservative management but occasionally arthroscopic treatment is needed (ref 2) and in severe cases the radial head needs to be replaced.

Painful clicking in the elbow may sometimes be due to a plica, a fold of tight synovium, which catches on some movements and may cause small erosions due to localised pressure. Once debrided (fig 3) the locking symptoms and pain usually subside.



Fig. 4

## Distal Biceps Injury/Bursitis

Chronic distal biceps partial rupture presents very differently to the acute traumatic rupture. There is often no specific injury, and the biceps contour looks fairly similar to the unaffected side, both during flexion/extension and pronation/supination.

There is usually a deep-seated pain in the anterior elbow. Palpation of the biceps tendon may be tender, and resisted supination with the elbow flexed is usually very painful.

MRI scans may reveal a partial detachment of the distal biceps tendon, and there is often fluid in the bicipital bursa overlying it. The remaining biceps tendon usually appears tendinopathic.

Depending on the age and level of activity of the patient, it is sometimes necessary to detach even the few remaining biceps fibres, which are invariably of poor quality, and then reattach it as a whole into a bone tunnel in the radius.

## Olecranon Spurs & Bursitis

These are usually asymptomatic but may sometimes be painful when resting on the point of the elbow. It may be associated with an overlying bursa.

Olecranon spurs (fig 4) usually settle with rest, but occasionally need to be excised. They may often become detached and present as a firm, mildly tender lump in the soft tissues, but these usually do not need excision.

Olecranon bursae will also usually settle with rest and NSAIDs. If tense they may need to be aspirated. They may occasionally become infected but usually it is an inflammatory process. Persistently swollen and painful bursae may be surgically excised, but this is associated with the risk of persistent bursal fluid oozing from the wound, which may prevent the wound from healing for several weeks. Surgery should be left as a last resort. There is also the risk of recurrence.



Fig. 5

## The Degenerate Elbow

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The elbow may move very well and show minimal swelling even with significant degenerative changes. However, these may suddenly become symptomatic and present with pain, stiffness, crepitus, and an effusion, most easily palpated postero-laterally by the radial head. Osteophytes may detach and act as loose bodies.

In younger patients there are often large osteophytes without complete destruction of the joint surface (fig 5). These patients will not be suitable for arthroplasty due to their high functional demands, and if conservative measures fail, including physiotherapy and intra-articular steroid injections, they may be suitable for arthroscopic or open debridement.

Arthroscopy for elbow arthritis is good for increasing the range of movement, and relieving stiffness/locking symptoms and pain but this may recur eventually, and arthroscopic debridement will buy them some time until they eventually need an elbow replacement.

The final stage of treatment for severe elbow arthritis is a total elbow replacement (TER – fig 6). This procedure is very much a last resort, as the patient is restricted to very light use forever more. Heavy use will wear the implants rapidly and necessitate revision, which is very challenging.

TER is very good at relieving pain and increasing the range of movement. It works particularly well in rheumatoid elbows, but also has good results in osteoarthritis, including post-traumatic osteoarthritis. Studies suggest that most total elbow replacements can last at least 10 years (ref 3). Charcot elbow is very challenging to treat, which is severe joint destruction due to an insensate elbow from any cause. Elbow replacements do not fare well as patients inadvertently overuse the elbow.

## Summary

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Non-traumatic elbow pain can be a diagnostic challenge, but systematic history taking and examination, along with appropriate investigation, can reveal the cause. Most conditions can be treated initially non-operatively, and with eventual surgery if needed. Urosepsis and ureteric injury patients may be left with an internal ureteric stent post procedure (fig 3).

### References:

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