

Olecranon bursitis

Definition of causal agent

Acute or repetitive (cumulative) microtrauma. Acute injuries could involve any activity causing direct trauma to the posterior elbow (e.g. direct blow, contusion, falling onto hard floor and landing on the olecranon process).

Repetitive micro-trauma – prolonged pressure to the elbow, repetitively rubbing olecranon region against a table, chronic overuse.

Main occupations where observed: miners, polishers, draftsmen, engravers, glass-blowers, watchmakers, sportsmen, etc.

Definition

Olecranon bursitis is the inflammation of the bursa overlying the olecranon process at the proximal aspect of the ulna. The bursa is located between the ulna and the skin at the posterior tip of the elbow. Olecranon bursitis is much more common in men.

Synonyms: “draftsman’s elbow”, “student’s elbow” and “beat elbow”.

□ Acute olecranon bursitis

Adverse effects

Acute olecranon bursitis is characterized by pain, localized tenderness and limitation of motion. The bursal wall secretes a serous effusion when inflamed. Swelling on the posterior side of the elbow and redness are frequently present.

Diagnostic criteria

- History: occupational trauma or exposure involving direct trauma to the posterior elbow
- Clinical symptoms:
 - Onset may be sudden if secondary to acute trauma
 - Focal swelling at the posterior elbow
 - Usually pain at the affected site, however, sometimes the swelling is painless
 - Pain often is exacerbated by pressure
 - Increased pain at night
 - Frequent bumping of the swollen elbow occurs because it protrudes further than normal.
- Signs:
 - The most classic finding is localized posterior elbow swelling which is clearly demarcated, appearing as a golf ball over the olecranon process
 - Tenderness to palpation is noted
 - The area may be warm and red
 - Skin inspection may reveal abrasion or contusion if there was recent trauma

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- Elbow range of motion (ROM) usually is normal, but occasionally the end range of elbow flexion may be slightly limited due to pain
 - Elbow pain during active or passive ROM may increase suspicion of fracture of the olecranon process.

Exposure criteria:

Minimal intensity of exposure: occupational trauma or occupational exposure assessed by history providing evidence of work involving pressure being placed on the elbow.

Minimal duration of exposure: from a few seconds or minutes to eight hours.

Maximal latent period: three days.

Differential diagnosis

- Fracture of the olecranon process of the ulna
- Presence of infection
- Crystalline inflammatory arthropathy (eg, gout, pseudogout)
- Ganglion - a cyst on a tendon, the elbow joint capsule or periarticular bursae
- Radial neuropathy
- Tennis elbow – inflammation of tendons surrounding the elbow joint
- Rheumatoid arthritis.

Necessary investigations:

Investigations are necessary primarily for excluding other differential diagnoses.

□ Chronic olecranon bursitis

Occupational chronic bursitis usually developed as initial chronic disease. The development is gradual without acute stadium (bursopathia). History of repetitive pressure at the elbow or chronic irritation is present.

Repetitive microtrauma could cause serous, proliferative and degenerative changes in the bursa. Eventually may develop adhesions, villus formation, tags and calcareous deposits. Pain, swelling and tenderness may result in muscle atrophy and limitation of motion.

Exposure criteria:

Minimal intensity of exposure: occupational exposure confirmed, if possible assessed, by the history and analysis of working conditions providing evidence of work being carried out in conditions with repetitive trauma of elbow.

Minimal duration of exposure: several months.

Maximal latent period: one month.

Diagnostic criteria

- Occupational history
- Clinical symptoms:
 - patients usually notice gradual focal swelling and pain at the posterior elbow, sometimes the Swelling is painless;
 - Pain often is exacerbated by pressure;

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- increased pain at night
 - Chronic recurrent swelling usually is not tender.
- Signs:
- The most typical finding is localized fluctuant posterior elbow swelling
 - The area may be warm and red
 - Tenderness to palpation is noted at the affected site
 - Elbow range of motion usually is normal but may be limited due to big size of localized swelling.

Differential diagnosis

- Presence of infection
- Tennis elbow
- Ganglion – a cyst on a tendon, the elbow joint capsule or periarticular bursae
- Crystalline inflammatory arthropathy (gout, pseudogout)
- Rheumatoid arthritis.

Laboratory studies must be provided if it is necessary.