



A conceptual study on Olecranon Bursitis with special reference to Kurpara Sandhi

Tomar P^{1*}, Marwaha R², Waghmare P³, Panda SD⁴

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^{1*} Priyanka Tomar, Post Graduate Scholar First Year, Dept of Rachna Sharir, Pt Khushilal Sharma Govt Ayurveda College, Bhopal, Madhya Pradesh, India.

² Rita Marwaha, Professor and HOD, Dept of Rachna Sharir, Pt Khushilal Sharma Govt Ayurveda College, Bhopal, Madhya Pradesh, India.

³ Pallavi Waghmare, Post Graduate Scholar Final Year, Dept of Rachna Sharir, Pt Khushilal Sharma Govt Ayurveda College, Bhopal, Madhya Pradesh, India.

⁴ Shiba Datta Panda, Lecturer, Dept of Rachna Sharir, Pt Khushilal Sharma Govt Ayurveda College, Bhopal, Madhya Pradesh, India.

Elbow joint, also known as the Kurpara Sandhi in Ayurveda, is a crucial articulation in the human body that enables a broad Spectrum of movements necessary for daily activities. Disorders affecting this Joint can significantly impair functionality. One such condition is Olecranon bursitis. Olecranon bursitis is Inflammation of the bursa overlying the olecranon process of the ulna associated with prolonged pressure at this point.[1] Prevalence among students due to prolonged desk work, student postures and sports activities. This conceptual study aims to explore the condition of olecranon bursitis in the context of Ayurveda and Emphasize an integrated approach to treatment, focusing on pain management and functional restoration of the elbow Joint. In Ayurveda, it can be correlated with the condition of Sandhigata Vata. It can lead to Shoth (Inflammation) and Shool (Pain).

Keywords: Kurpara Sandhi, elbow joint, olecranon bursitis, Sandhigata Vata

Corresponding Author	How to Cite this Article	To Browse
Priyanka Tomar, Post Graduate Scholar First Year, Dept of Rachna Sharir, Pt Khushilal Sharma Govt Ayurveda College, Bhopal, Madhya Pradesh, India. Email: dr.priyankatomar27@gmail.com	Tomar P, Marwaha R, Waghmare P, Panda SD, A conceptual study on Olecranon Bursitis with special reference to Kurpara Sandhi. J Ayu Int Med Sci. 2025;10(6):240-243. Available From https://jaims.in/jaims/article/view/4393/	

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Introduction

Elbow joint (*Kurpara Sandhi*) is one of the most complex hinge joints in the body, facilitating flexion and extension movements.[2] Ayurveda characterizes, it as a significant joint that is essential for body movement and Strength. Any disruption in its function due to trauma, inflammation or degenerative changes leads to significant disability. There are a number of conditions that can affect the joint, including olecranon bursitis, which can result in swelling, pain and a restriction of movement.

The olecranon bursa is a fluid-filled sac that is superficial to the olecranon bone at the dorsal aspect of the elbow and is enclosed by a synovial membrane. The function of the bursa is to facilitate movement of tendons and muscles over bony prominences. The olecranon bursa is susceptible to tissue injury as a result of pressure, trauma, and infection due to its superficial location in the subcutaneous tissue and limited vascularity. Olecranon bursitis is defined as inflammation of the olecranon bursa.

In India, where the educational System places enormous pressure on student to perform academically, the prevalence of Olecranon bursitis is high. The improper posture, prolonged hours spent studying and greater usage of digital devices such as laptops and smartphones significantly elevate the risk of these diseases.

This article reviews the anatomical and therapeutic aspects of *Kurpara Sandhi* and olecranon bursitis, integrating *Ayurveda* perspectives.

Literature Review

Modern Perspective

Elbow joint: It is a composite joint between the humerus, ulna and radius. It's allowing flexion and extension of the arm and also rotating movements of the forearm.

Bursa: The bursa is a fluid -filled sac that acts as a Cushion between the skin and bone, reducing friction during movement and due to trauma and repetitive stress, the inflammation occurs.

Olecranon Bursa: The olecranon bursa is a small, fluid-filled sac that is situated at the point of the elbow,

Just above the olecranon process of the ulna, is one of the bones in the forearm. Its primary function is to minimize the friction between the skin and the bony prominence of the elbow, particularly during movements such as bending or leaning on the elbow.

Bursitis

Bursitis is defined as inflammation of a bursa, a thin -walled sac lined with synovial tissue.[3] This condition may be caused by excessive friction force, trauma and systemic diseases.

Olecranon Bursitis: A small subcutaneous bursa is constantly present over the olecranon process of the ulna and is likely to become inflamed when exposed to repetitive trauma.

Students and Coal miner share this hazard, so it is also known as 'Student elbow' and minor's elbow.[4]

Ayurvedic perspective

Kurpara Sandhi

Based on *Kriya*: *Kurpara Sandhi* is a type of *Cheshtavanta Sandhi*.

Based on *Rachana*: It is a type of *Kora Sandhi*. [5]

The functional aspect of the *Kurpara Sandhi* is governed by *Vata Dosha*, which controls movements and *Shleshaka Kapha*, which is responsible for lubrication. The main anatomical components of *Kurpara Sandhi* are *Asthi*, *Snayu*, *Slesmadhara Kala*, *Slesma*, *Peshi*, *Sira* and *Dhamani*.

Sandhigata Vata

हन्ति सन्धिगतः सन्धीशूलशोफौ करोति च । (सुश्रुत संहिता निदान स्थान १/२८)

Localized in *Sandhi* it destroys the action of the joints and give rise to pain and swelling in them.[6]

Kurpara Marma

This *Marma* is situated at the elbow joint. It's classified as a *Vaiklyakara Marma*. Injury to this *Marma* causes inflammation, leading to loss of the function of the limb.

Anatomy of Elbow Joint

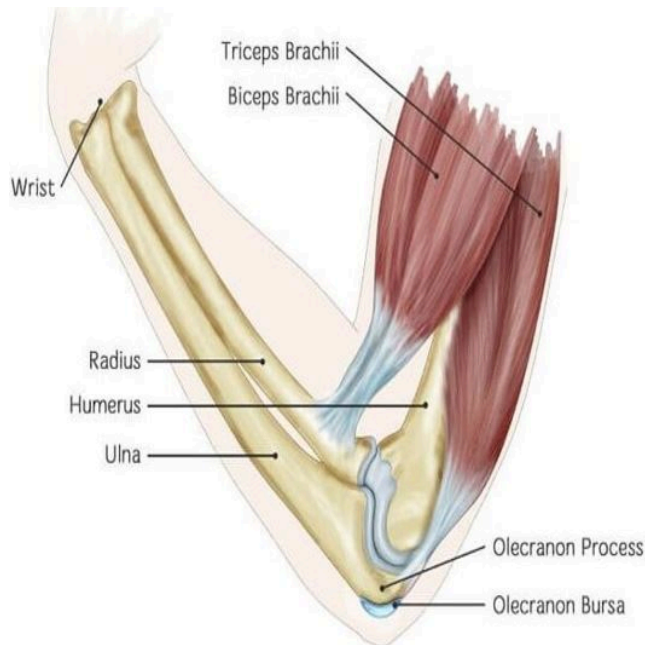
The elbow joint is a type of synovial hinge joint, continuous with the superior radio ulnar joint.

Articulation: The articulating parts of the elbow joint -

Humeroulnar joint: Between the trochlea of the humerus and trochlear notch of the ulna.

Humeroradial joint: Between capitulum of humerus and upper surface of head of radius.

Superior radio ulnar joint: Between the head of the radius and the radial notch of the ulna.



Muscles: Four main groups:

1. Elbow flexors group: The biceps brachii, the brachioradialis and the brachialis.
2. Elbow extensors group: The triceps brachii and the anconeus.
3. Flexor-pronator group: Pronator teres, flexor carpi radialis, palmaris longus, flexor carpi ulnaris and flexor digitorum superficialis.
4. Extensor-supinator group: brachioradialis, extensor carpi radialis brevis and longus, supinator, digitorum, extensor carpi ulnaris and extensor digiti minimi.

Ligament:

1. Capsular ligament
2. The ulnar collateral ligament
3. The radio collateral or lateral ligaments.

Synovial membrane: It is attached to the inferior margin of the articular surface of the radius and the lower margin of the radial notch of the ulna.

Nerve Supply:

1. Musculocutaneous nerve
2. Radial nerve

3. Ulnar nerve
4. Median nerve.

Movements of Elbow joint:

Flexion: This movement is performed by the triceps and anconeus muscles.

Extension: This movement is performed by the brachialis, biceps brachii, brachioradialis and pronator teres muscles.

Olecranon Bursitis:

Subcutaneous olecranon bursitis: results from repeated excessive pressure and friction between the skin and the olecranon process of the ulna.

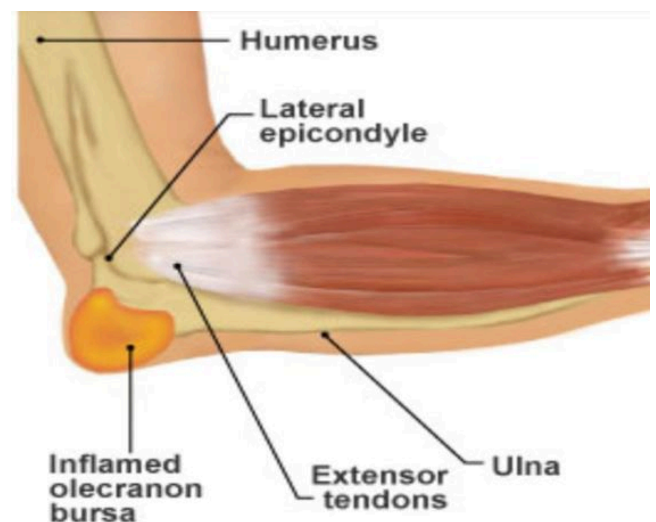
Subtendinous olecranon bursitis[7]: results from excessive friction b/w triceps tendon & olecranon.

Etiology:

Trauma or Repeated pressure: A direct impact to the elbow and prolonged pressure from leaning on hard surfaces inflamed the olecranon bursa.

Septic olecranon bursitis (Infection): It is caused by bacterial infection, often staphylococcus aureus.

Inflammatory conditions: Autoimmune diseases such as – Rheumatoid arthritis, Gout etc.



Pathophysiology and clinical features:

The underlying pathophysiology of olecranon bursitis involves inflammation of the olecranon bursa, leading to pain, swelling and restricted movements. In *Ayurveda*, this condition can be correlated with '*Sandhigata Vata*' which is characterized by similar symptoms such as pain, inflammation and deformity in joints.

The *Ayurvedic* perspective emphasizes *Vata Dosha* and its aggravation by overuse and improper posture.

Discussion

Olecranon bursitis is a condition that has a substantial effect on the function of the elbow and overall quality of life. Its prevalence is increase particularly among students and desk bound professionals, due to the increase prevalence of digital uses and poor posture habits. Any injury to the region can result in significant dysfunction. Usually self- limited, the disorder can be treated conservatively with rest, ice, compression and non-steroidal anti -inflammatory drugs. In comparison to noninvasive management for the initial therapy of non-septic olecranon bursitis[8], recent literature has demonstrated that intrabursal injection and surgery have adverse effect. For the purpose of making more informed and individualized decisions.

It is essential for hand surgeons to have a comprehensive understanding of the relative effectiveness of each treatment option for the management of non-septic olecranon bursitis. *Marma* are vital points, centres for the *prana*. which is mainly associated with the *Vata Dosha*. *Marma Chikitsa* is a method of healing that is natural, immediate and non-invasive. *Marma Chikitsa* helps to flow positive *Prana* through the various channels using pressure on *Marma Sthan* and this *Prana* manage to treat diseases such as muscular sprain and joint pain etc. It is an advanced Ayurveda technique employed for diagnosis and treating specific diseases, as well as alleviating pain.

The classical texts of *Ayurveda* described 107 *Marma Sthan*. *Kurpara Marma* is one of them described in Ayurveda. *Kurpara Marma*, being at the anatomical site of the elbow, play a crucial in the integrity and function of the elbow joint. *Kurpara*, *Indrabasti*, *Ani*, *Manibandha* and *Kshipra Marma* play a crucial role in pain management in non-septic olecranon bursitis. *Marma Chikitsa* is a holistic and neuro-modulatory therapeutic approach for managing olecranon bursitis.

Conclusion

This conceptual study establishes a connection between the conventional Ayurveda perspective on joint health and contemporary pathological insights.

Understanding *Kurpara Marma Chikitsa* role in diseases like olecranon bursitis enhance diagnosis and treatment and promotes integrative methods of treating joint ailment. Further clinical and textual exploration may provide deeper insight into the efficacy of *Marma Chikitsa*.

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