

A TANGLED WEB: AXILLARY WEB SYNDROME AND EXTENSOR POLLICIS LONGUS TENDON INJURY –A RARE DUAL COMPLICATION CHALLENGING RECOVERY

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Background

Extensor pollicis longus (EPL) tendon rupture, a rare complication of distal radius fractures, often occurs at Lister's tubercle due to poor vascularization. It results from mechanical attrition, ischemia, or compartment pressure. Conservatively managed fractures can lead to EPL rupture, presenting as thumb extension loss and wrist tenderness. Treatment typically involves extensor indicis proprius (EIP) tendon transfer. Axillary Web Syndrome (AWS), a post-surgical breast cancer complication, causes painful axillary cords that restrict shoulder mobility. It usually resolves within three months, with physiotherapy as the main treatment. Lymphatic dissection, and chemotherapy are risk factors.

Case report

A 70-year-old woman with left breast cancer underwent neoadjuvant chemotherapy. On the day of her axillary lymph node dissection, she sustained a fall, resulting in left radius and ulna fractures, managed conservatively with a plaster splint. She later developed a complete active extension deficit of the left thumb interphalangeal joint, leading to a diagnosis of extensor pollicis longus (EPL) tendon rupture, requiring tendon transfer using the extensor indicis proprius (EIP). The patient continued oncological treatment with radiotherapy and hormone therapy. Post-surgery, she regained thumb extension and index finger flexion but had difficulty with thumb opposition, tip-to-tip pinch, and developed allodynia in the index finger scar. Left axillary web syndrome (AWS) was also noted, limiting shoulder mobility (active ROM: 80°, passive ROM: 110°). Rehabilitation included passive mobilization, strengthening exercises, thumb motor training, scar release massage, and sensory re-education. She also received Neurobion, Pregabalin, and Lidocaine plasters. Passive shoulder ROM improved to 140° and active ROM to 120°. She regained the ability to perform a tip-to-tip pinch with the 5th finger, showing functional improvement despite residual limitations.

Conclusion

This case highlights the rare coexistence of EPL rupture and AWS, complicating recovery. Early tendon transfer and physiotherapy were crucial, emphasizing the need for a multidisciplinary approach in complex post-fracture and post-surgical rehabilitation.

Keywords: DistalRadiusFracture, ExtensorPollicisRupture, AxillaryWebSyndrome