

Ulnar Nerve Compressive Neuropathy Secondary To Langer's Axillary Arch In Paediatric

¹Rahamzan NA; ²Tan YY; ²Chan KL

¹Department of Orthopaedics & Traumatology, Hospital Queen Elizabeth II, Kota Kinabalu, Sabah, Malaysia

²Department of Orthopaedics & Traumatology, Hospital Queen Elizabeth I, Kota Kinabalu, Sabah, Malaysia

INTRODUCTION:

Langer's axillary arch is the variation of muscle tissue formed in the axilla, which implicates with neurovascular compression syndrome, especially when the muscle is thick and broad¹.

REPORT:

A 1-year-old boy was first referred to us for mild case of right ring and little finger camptodactyly. First noticed by mother since the age of 5-day old. Otherwise, birth history was uneventful. Upon assessment, the right upper limb hypothenar muscle wasted with ulnar claw. We also noted a non-tender palpable cord-like structure over medial aspect proximal arm in closed proximity to the axilla. Otherwise, the range of motion of wrist, elbow and shoulder were full, distal pulses were palpable with good volume.

Plain radiograph was unremarkable, proceeded with magnetic resonance imaging (MRI) of right arm and axilla, which showed accessory muscle axillary arch which possibly originated from the anterior border of latissimus dorsi with possible adjacent nerve impingement (ulnar nerve).

Subsequently, proceeded with muscle released and ulnar nerve exploration of right axilla. Intra-operatively noted aberrant muscle originated from posterolateral border of pectoralis major muscle, inserted to medial border of short head of biceps brachii muscle. Ulnar nerve was just posterior to the aberrant muscle, which showed hourglass appearance. One-month follow up showed scar well healed, and improvement of ulnar claw.

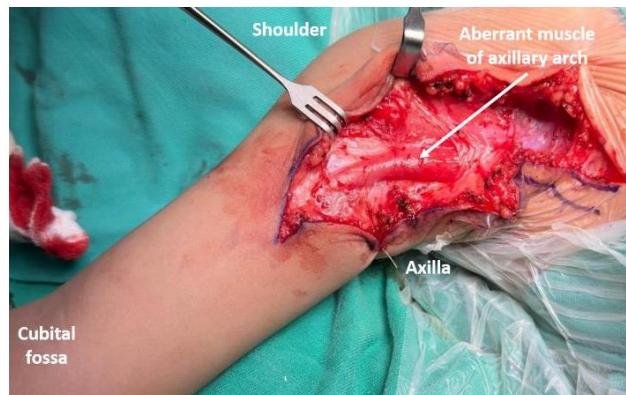


Figure 1 Aberrant muscle arising from pectoralis major inserting to the biceps brachii

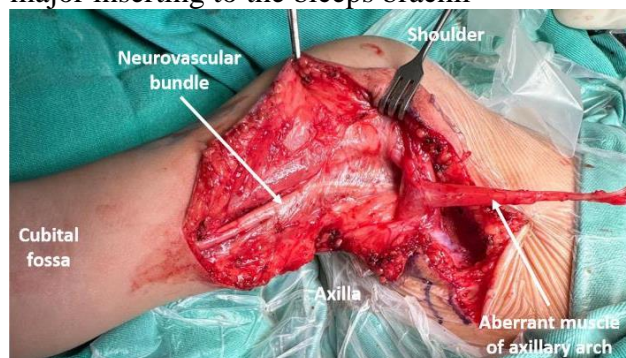


Figure 2 Neurovascular bundle just posterior to the aberrant muscle

CONCLUSION:

Isolated ulnar nerve palsy secondary to axillary arch is exceptional, hence diagnosing it requires thorough examination due to its proximity to the axilla. If left untreated may lead to worsening of neurovascular compression, possibly leading to brachial plexus palsy in this patient.

REFERENCES:

1. Jeremias TW. et al., Axillary arch (of Langer): A large-scale dissection and simulation study based on unembalmed cadavers of body donors, Journal of Anatomy, 2023.