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Case report:

Accessory slip of coracobrachialis muscle – a case report

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Abstract:

Coracobrachialis is the mucle of flexor compartment of arm. Variations of Coracobrachialis are found in human beings but rarely. Coracobrachialis takes origin from the tip of Coracoid process of scapula along with short head of Biceps Brachii[1].It is usually inserted in the medial border of the middle of the shaft of humerus. It was seen in a dissected cadaver that the insertion of a part of the muscle was in the medial intermuscular septum which varied from the normal. .

Keywords: Accessory slip, Wood's muscle, CoracobrachialisLongus, Ligament of Struthers

Introduction:

During the process of evolution the Coracobrachialis which is the adductor of the arm lost its functional importance[1]. It arises from the tip of the Coracoid of scapula along with short head of Biceps brachii and is normally inserted into the medial border of the middle of the shaft of humerus. It is supplied by Musculocutanuous Nerve ($C_5C_6C_7$) a branch of the lateral cord of the Brachial plexus[2, 3]. Coracobrachialis flexes the arm forward and medially, especially from a position of brachial extention[2]. Coracobrachialis is showing different type of variations[4, 5, 6].

Case report:

During routine dissection in Anatomy Department at North Bengal Medical College, Darjeeling a male cadaver was seen to have accessory slip in addition to the main bulk of the Coracobrachialis muscle. The origin was normal in position. It was seen an additional slip of the Coracobrachialis muscle (about 11cm in length) inserted in the distal part of the medial intermuscular septum in the left arm. The Median Nerve and Brachial artery was seen passing deep to this accessory slip. The right arm revealed normal disposition.

Discussion:

Accessory slips of Coracobrachialis may be inserted in lesser tubercle, medial intermuscular septum or medial epicondyle[1]. An anomalous insertion of Coracobrachialis distally than usual is referred to as Coracobrachialis Longus or Coracobrachialis inferior or WOODS MUSCLE [4,6,7] The main bulk of Coracobrachialis in man is remnant of Coracobrachialis medius and Woods muscle or Coracobrachialis Longus represents the third part of the muscle as reported by WOOD. J. [4]. The resemblance of Coracobrachialis with adductor of lower extremity was noted by Wood. J. The (1) short upper part corresponds to Adductor Brevis (2) the medial portion to Adductor longus and (3) Long inferior portion to Adductor Magnus. Tricipital origin of Coracobrachialisis seen is lower animals

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and the lower head is found tobe suppressed in man and may persist as a fibrous band called Ligament of Struthers found in <2% of mammals and extends from the supratrochlear spur from antreromedial part of lower part of humerus to medial epicondyl[1,8] The vessels and nerves passing below the accessory slip may be compressed producing ischemic features of forearm & entrapment features of the nerve respectively[5,8] .

Knowledge of the variation is important for radiologists and in invasive surgery for proper decision. Anatomic variations of coracobrachialis muscle can be confused with other muscle and pathological condition at CT and MRI scan[6] . Such accessory slips may be used in graft surgeries. Abnormal insertrion of the Coracobrachialis muscle should be kept in mind in a patient representing high Median nerve palsy[5,9,10,11].

Embryological basis:

Variations of coracobrachialis can be explained on the basis of the embryogenesis of the muscle of arm.The muscles of the limb bud differentiate from mesenchyme of lateral plate mesoderm. They usually fuse to from a single muscle bulk. Failure of fusion of the different layers of muscle accounts for the accessory insertion[8].

Conclusion:

The neurovascular bundle passing below the accessory slip may be compressed due to anomalous insertion, Producing vascular spasm and Median nerve palsy. Knowledge of the variation is important for radiologists and in invasive surgery for proper decision. Abnormal insertion of the Coracobrachialis muscle should also be kept in mind in a patient presenting with high Median nerve palsy.

Figure 1: Origin of Accessory Slip of Coracobrachialis

CB – Coracobrachialis
AS – Accessory Slip of Coracobrachialis
BA – Brachial Artery
MN – Median Nerve
MCN – Musculocutaneous Nerve
BB – Biceps Brachii

Figure 2 Accessory Slip bridging over Brachial Artery & Median Nerve

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Figure 3 Insertion of Accessory Slip of Coracobrachialis

1 – Distal attachment of accessory slip of coracobrachialis in medial intermuscular septum.

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