Case report: Accessory slip of coracobrachialis muscle – a case report

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Abstract:
Coracobrachialis is the muscle 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 and is normally inserted into the medial border of the middle of the shaft of humerus. It is supplied by Musculocutaneous Nerve (C5C6C7) a branch of the lateral cord of the Brachial plexus2, 3. Coracobrachialis flexes the arm forward and medially, especially from a position of brachial extention2. Coracobrachialis is showing different type of variations4, 5, 6.

Keywords: Accessory slip, Wood’s muscle, Coracobrachialis Longus, Ligament of Struthers

Introduction:
During the process of evolution the Coracobrachialis which is the adductor of the arm lost its functional importance1. 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 Musculocutaneous Nerve (C5C6C7) a branch of the lateral cord of the Brachial plexus2, 3. Coracobrachalis flexes the arm forward and medially, especially from a position of brachial extension2. Coracobrachialis is showing different type of variations4, 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 epicondyle1. An anomalous insertion of Coracobrachialis distally than usual is referred to as Coracobrachialis Longus or Coracobrachialis inferior or WOODS MUSCLE4,6,7 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 Coracobrachialis seen is lower animals
and the lower head is found to be 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 anteromedial
part of lower part of humerus to medial epicondy1,8
The vessels and nerves passing below the accessory
slip may be compressed producing ischemic
features of forearm & entrapment features of the
nerve respectively5,8.

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 scan6. Such
accessory slips may be used in graft surgeries.
Abnormal insertion of the Coracobrachialis muscle
should be kept in mind in a patient representing
high Median nerve palsy5,9,10,11.

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 insertion8.

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
Figure 3 Insertion of Accessory Slip of Coracobrachialis

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

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