



CASE REPORT

ABSENCE OF PALMARIS LONGUS MUSCLE-A CASE REPORT

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Abstract :

This paper describes the absence of palmaris longus muscle. This variation was found during cadaver dissection in the department of Shareera Rachana at Sri Dharmasthala Manjunatheshwar College of Ayurveda & Hospital, Hassan, Karnataka (India). During routine dissection of a male cadaver (about 55 years of age), in the left upper limb authors observed the absence of palmaris longus muscle. Authors have compared their findings with the presence of palmaris longus muscle of other limb and possible variations of palmaris longus muscle reported in the literature. The importance of variation in absence of palmaris longus muscle has been discussed.

Keywords: anatomical variation, muscle, palmaris longus

Introduction

Palmaris longus is often described as one of the most variable muscles in the human body and is phylogenetically classified as a retrogressive muscle i.e. a muscle with a short belly and a long tendon.¹ It is a slender fusiform vestigial muscle situated between the flexor carpi ulnaris. The muscle takes from the common flexor tendon (medial epicondyle of humerus) from adjacent intermuscular septa and the antebrachial fascia. Its long flexor tendon passes anterior to the flexor retinaculum, and gets inserted into the distal 1/3rd of its anterior surface and centrally to the palmar aponeurosis. The muscle is supplied by the median nerve (C7-8).² Palmaris longus can be palpated by touching the pads of 5th & 1st fingers & flexing the wrist, the tendon, if present, will be visible. This test is known as Shaffer's test.³

Case Report

During routine cadaver dissection for undergraduate students in the department of Shareera Rachana at Sri Dharmasthala Manjunatheshwara College of Ayurveda &

Hospital, Hassan, Karnataka state, authors found absence of palmaris longus muscle in the left forearm in a male cadaver, about 55 years age. Arrangement of other flexor muscles & attachment of flexor retinaculum were found normal.

Discussion:

Although variations of palmaris longus muscle are described in anatomical text books, they are seen rather rarely in practice⁴. Agnesis of the palmaris longus has been attributed to Mendelian characteristics. The absence of the muscle has been described as ranging from a high of about 25% to 16% in white Caucasians to a low of 4% in mongoloids. An average of 10% absence has been universally accepted.¹

The palmaris longus muscle is the most popular for use in tendon grafts for the wrist due to the length and diameter of the palmaris longus tendon, and the fact that it can be used without producing any functional deformities.⁵ When a tendon becomes ruptured in the wrist, the palmaris longus tendon may be removed from the flexor retinaculum and grafted to take the

place of the ruptured tendon. The tendons most commonly replaced or supplemented by the palmaris longus tendon when ruptured are the long flexors of the fingers and the flexor pollicis longus tendon.⁶

The palmaris longus muscle itself is a weak flexor, and provides no substantial flexing force that would inhibit movement in the wrist if its tendon was cut and moved elsewhere. If the palmaris longus muscle is not available for harvesting in an individual, the anatomically analogous plantaris muscle in the leg may be taken instead.⁷ Using the patient's own tendon is advantageous, as it does not introduce foreign material into the body.

The present case discusses the unilateral absence of palmaris longus muscle, which does not have any known effect on grip strength. However, lack of said muscle is disadvantageous in that its tendon cannot be harvested as a graft if necessary.

Conclusion:

In literature there are few cases reported regarding the absence of the palmaris longus muscle. Knowledge of this variation is important that every surgeon must be aware of them, since this, otherwise unimportant muscle, provides a very useful graft in tendon surgery.

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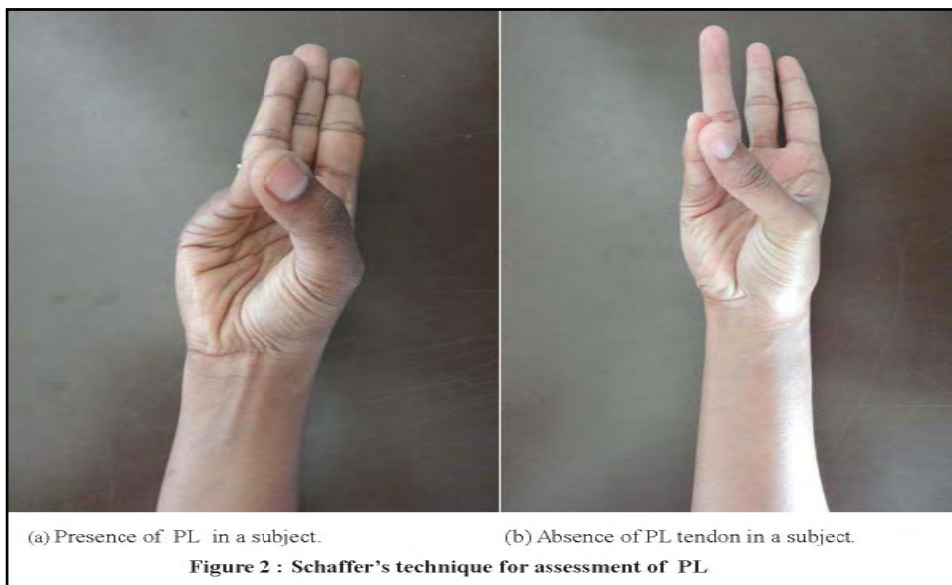
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