



PRESENCE OF CHEEK DIMPLE AND ABSENCE OF PALMARIS LONGUS-A POPULATION SURVEY.

Anuradha KamathStudent, 1stMBBS, KVG Medical College ,Sullia, Rajiv Gandhi University Of Health Sciences, Karnataka**Yashaswini S.V***Student , 1stMBBS, KVG Medical College ,Sullia, Rajiv Gandhi University Of Health Sciences, Karnataka *Corresponding Author**Anushree I.R**Student , 1stMBBS, KVG Medical College ,Sullia, Rajiv Gandhi University Of Health Sciences, Karnataka**V.S.Pare**

Professor and HOD, Department of Anatomy, KVG Medical College Sullia, Rajiv Gandhi University Of Health Sciences, Karnataka

Jyothi S.R

Assistant Professor, Department of Anatomy , KVG Medical College Sullia, Rajiv Gandhi University Of Health Sciences, Karnataka.

Praveen Shenoy

Assistant Professor, Department of Anatomy , KVG Medical College Sullia, Rajiv Gandhi University Of Health Sciences, Karnataka.

ABSTRACT

The study was conducted in KVG group of institutions, sullia.900 boys and girls were subjected to the study. The literature variation of absence of palmaris longus shows as low as 3% to as high as 27%.in Indian population.in our study the absence of Palmaris longus contribute to 11.55%.more interestingly we also noted the presence of cheek dimples in as high as 50% in people with absence of Palmaris longus. We conclude that one in two or three will have a bifid zygomaticus major who has absence of Palmaris tendon, best demonstrated in living than in cadaveric study.

KEYWORDS : Palmaris longus, zygomaticus major, cheek dimple, facial expression**Introduction:**

PL is one of the superficial flexor muscles of the forearm. It has short fusiform belly & cord like tendon¹. Its tendon is a useful indicator of the anatomical position of the Median nerve in surface anatomy. It is been observed that individuals may have unilateral or bilateral absence of PL². In fact, the tendons presence is so benign that it is very common for it to be removed and used in tendon graft or cosmetic surgery³. The tendon is usually present in animals like Lemurs and monkeys, but it is useful to them because it helps to navigate through trees. The attention of anthropometric and clinical studies has been attracted to phylogenetic agenesis of PL for the following reasons :One of them is PL's weakened performance in human bipedal locomotion in comparison with the quadrupedal mammals and the other is its tendon usage in reconstructive surgery such as cruciate ligament replacement in the knee, upper eyelid ptosis correction and chin reconstruction⁴.the study's have conducted to prove its ethnic variation and clinical correlations⁵

Materials and methods.

The study is conducted in KVG group of institutions, Sullia.Age group in our study ranges from 18 to 24 years.400 boys and 500 girls from medical, nursing, ayurvedic, dental and engineering students were subjected to tests to determine the presence or absence of Palmaris longus tendon.History of any hand surgery, deformity, old fractures at wrist,obesity are excluded from the study.We also noted the gross variations in muscles facial expression, mainly the bifid zygomaticus major, which is documented to cause the cheek dimple and chin dimple. The methods used are

- Traditional Test : The thumb opposes the five finger with slight wrist flexion.
- Pushpakumar's two – finger sign method : The subject is asked to fully extend the index and middle finger. The wrist and other fingers are flexed and finally the thumb is fully opposed and flexed.

If we cannot see the protuberance beneath the skin in the distal forearm, then we asked the subject to do ulnar and radial deviation

to confirm the presence of tendon superficially. If it is not palpable it is taken as agenesis of palmaris longus tendon. The bifid zygomatic major which causes cheek dimple⁶.Facial expression of zygomaticus major tested with a radiant smile.

RESULTS

		Abse nce of PL	% of abse nce	B/L ABSE NCE	% OF B/L ABSEN CE	U/L ABSEN CE	% OF U/L ABSEN CE	cheek dimple	% OF CHEEK DIMPLE
boys	400	36	9.0	17	4.25	19	4.75	6	1.5
girls	500	68	13.6	37	7.4	31	6.2	41	8.2
total	900	104	11.55	54	6.0	50	5.55	47	5.4

Discussion:

Agenesis of PL has been attributed to Mendelian Characteristics⁷. In our studies we noted agenesis of PL in 11.55%. The reported prevalence of absence of Palmaris longus varies significantly among studies and its presence in the majority of the population makes it a widely used donor material for tendon and joint reconstruction surgeries. Dimples are visible indentation of skin caused by bifid zygomaticus major , percentage of bifid zygomaticus major in Indians is 20% according to Mary antony praba et al⁶. absence of PL has a wide range of variation .In Babaee abdolreza et al⁹ . also based ethnicity the malayans have the highest prevalence of absence of PL followed by Indians and Chinese¹⁰ . also the cheek dimples, unilateral and bilateral among female is more than males among south western Nigerians¹¹ .

In similar study done by sankard et al⁸ , shows the incidence of PL absence is higher in females.Our study is in agreement.

Conclusion :

Many cadaveric and population study on PL have done to prove the agenesis, ethnic variation, clinical application and morphological variations.The results obtained varies drastically from 3% to 30%.in

our study it is found to be 11.55%. Females are more prone than men. The presence of cheek dimple in as high as 50% of subjects with agenesis of Palmaris longus. Further, population and cadaveric study is recommended to prove the observations made.

Abbreviations used;

KVG-Kurunji Vekratramana Gowda

PL-Palmaris longus

Competing interest : none

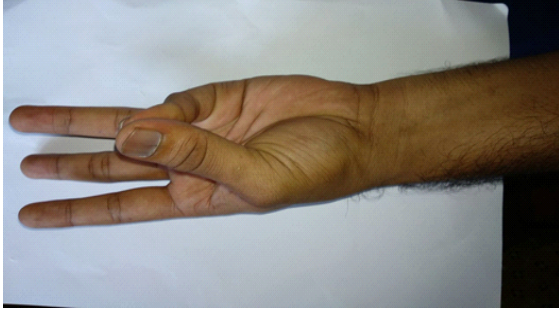


Fig 1 : Test a & b done on all patients to demonstrate the absence of PL

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