

Conflicts of interest

The authors have none to declare.

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The morphometry of patella

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Background: Patella is the largest sesamoid bone in the body which develops from the tendon of the quadriceps femoris muscle. It is important anthropometrically as well as pathologically because it is one of the parts like distal end of femur, proximal end of tibia and bones of ankle which are concerned in various method of sitting and squatting and withstand continuous stress and strain exerted by body in standing, walking and running. The paucity of morphometric study on patella of any population or group of Gujarat prompted the present study.

Material and methods: The present study was conducted on 81 patellae obtained from department of anatomy, Baroda medical college. The morphometric parameters like length, width, thickness, articular facets, nonarticular area, and ridge thickness were measured. Distal nonarticular portion of patellae were classified.

Results: The shape pattern of patellar articular facets classified according to Wiberg's classification. The most predominant pattern was type-II with normal nose pattern on both the side. A lateral facet prominence was observed for median ridge and variation in the prominence of secondary ridges which are distinct in 11% cases.

Conclusion: The morphometric data obtained from the patellae are crucial in the diagnosis and development of surgical techniques and often utilized in certain surgical procedures such as patellar resurfacing for total knee arthroplasty. The present study also beneficial for local anthropological records.

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Goniometric study of carrying angle of upper extremity and its correlation with various parameters in western Rajasthan population

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Aims and objectives: The angle formed by the axes of the arm and the axes of forearm when the elbow is fully extended and forearm is supinated that obtuse angle is known as "carrying angle". The present study aimed measure and correlation of carrying angle with various parameters in young males and females.

Materials and methods: The present study includes 200 (100 females and 100 males) healthy students of MBBS from Dr. S.N. Medical College, Jodhpur, were selected and age groups is 18–22 years. Universal goniometer is used for measurement of carrying angle. Bicipital groove, biceps brachii tendon at its insertion and palmaris longus tendon at the wrist were palpated and marked as anatomical landmarks to demarcate the median axes of arm and

forearm respectively. Measurements were documented and statistically analyzed.

Result: The mean carrying angle of male on right limb was 11.80 ± 4.98 and the females was 13.42 ± 6.01 , p -value (<0.003) and the mean carrying angle of male on the left limb was 11.11 ± 5.08 and the female was 13.01 ± 5.97 , p -value (<0.01). We observed the greater carrying angle in dominant limb than the non-dominant limb and mean carrying angle was greater in females than males.

Conclusion: The present study showed that the carrying angle was greater in females than in males and was greater in dominant arm than in non-dominant arm.

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Tyrosine receptor kinase A expression in malignant and benign breast tumors

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Introduction: Breast cancer is one of the major causes of cancer-related deaths in women. The prototype member of the neurotrophin family, i.e. nerve growth factor (NGF), along with its two receptors tyrosine kinase A (TrkA) and p75 neurotrophin (p75NTR) receptors are implicated in number of cancers including breast by various study reports. The TrkA receptor has been indicated to play a significant role in regulation of tumor growth and metastasis, and may serve as potential targets for therapeutic strategies in breast cancer. But studies are scarce on this issue which has examined malignant and benign breast tumors together which may provide clearer view on perceived role of TrkA. The present study was designed to observe and compare TrkA receptor expression in malignant and as well as benign breast tumors.

Materials and methods: Fresh surgically removed tissue from malignant and benign breast tumors specimens were collected from 28 patients reporting to Surgery OPD) and classified in 4 groups (tissues collected from 7 patients per group) for comparison. The receptor expression was assessed by immunohistochemistry (IHC), using the indirect peroxidase method. Normal tumor margins under each category were used as control.

Result: A differential TrkA receptor expression was observed in malignant (maximal) when compared with benign breast tumors, and normal tumor margin (minimal).

Conclusion: Significantly increased expression of TrkA receptor in CA Breast tumors in comparison to benign tumors, and normal tumor margin indicates its potential role in carcinogenesis and warrants for further research on this issue.

Conflicts of interest

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