

**Materials and Methods:** Total 450 (200 male and 250 female) students were identified as subjects for the study after taking consent.

**Results:** Stature in males varied from 138 cm to 184 cm with mean value of 158.71 cm and standard deviation (SD) of 5.988 cm. Median of stature was 161.14 cm. Stature in females varied from 132 cm to 166 cm with mean value of 146.82 cm and standard deviation (SD) of 5.604 cm; median of stature stood at 149.08 cm. This difference in mean stature between males and females was statistically highly significant ( $p < 0.001$ ).

**Conclusion:** Estimation of stature among the population can be carried out using foot length and there is positive correlation between stature and foot length in a particular population.

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#### 14. Study of variations in the base of the skull

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**Aims and Objectives:** Base of the skull is highly irregular and the variations are very likely to be observed very frequently because of the highly complicated way in which the development occurs. The objective of the study is to report the different variations and the frequency in which the variations are observed in south Indian population.

**Methods:** The present study was done in the Department of Anatomy, DM-WIMS, Meppadi, Kerala using 100 skulls.

**Results:** The variations observed were elongated styloid process, tubercle on the anterior margin of the foramen magnum, tubercle on the posterior margin of the foramen magnum, bilateral facets on the posterior margin of the foramen magnum, and occipitalization of the first cervical vertebrae.

**Conclusion:** Variations are common around the foramen magnum; so it complicates the picture because many important structures are passing to and fro from the foramen magnum and presence of such variations may lead in complications. So to the clinicians, it is important to be aware of such malformations.

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#### 15. Carotid bifurcation level and morphometry of anterior branches of external carotid artery

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**Objective:** The common carotid artery bifurcates into external and internal carotid arteries at superior border of thyroid cartilage. The superior thyroid, lingual, and facial arteries are anterior branches of external carotid artery.

**Materials and Methods:** Common carotid artery, external carotid artery, and the anterior branches of external carotid artery were dissected in 30 adult formalin-fixed sagittal head and neck sections in the Department of Anatomy, KMC,

Manipal. The parameters studied were level of bifurcation of common carotid artery, relation of external and internal carotid arteries, and origin and distance of anterior branches of external carotid from bifurcation; any other variations were also noted.

**Results:** In 53% of cases the common carotid artery bifurcated at the level of superior border of thyroid cartilage, in 16% cases below the level of superior border of thyroid cartilage, in 26% cases at the level of inferior cornu of hyoid bone, and in 3% cases at the mandibular angle.

**Conclusion:** A clear anatomical knowledge of the carotid arteries and their branches is essential for any surgical interventions to minimize unwanted bleeding and also during radiological investigations of the carotid arterial system.

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#### 16. A comet assay study on DNA damage in children with non-syndromic congenital malformations

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**Aims and Objectives:** Congenital malformations or birth defects are often classified as major and minor anomalies. About 40–60% of birth defects are due to unknown etiology. Increased genomic instability in the form of chromosomal breaks, deletions, and translocations has been observed in children with congenital malformations of various types. The present study is undertaken to assess the DNA damage in these cases.

**Materials and Methods:** Twenty cases of different types of congenital malformations in children below 5 years of age were considered for the current study. Equal numbers of normal healthy children without any congenital malformation matched with the cases in age and sex were also taken as a control to investigate the extent of DNA damage in both groups. The comet assay is very sensitive and useful for detection of DNA damage.

**Results:** The mean tail length of the cases was found to be 22.66  $\mu\text{m}$  and that of the control group was 1.992  $\mu\text{m}$ . The values were analyzed for statistical significance and were found out to be extremely significant with the  $P$  value  $< 0.0001$ .

**Conclusion:** There was a significant increase in comet tail length observed in different types of congenital malformations when compared to matched controls. The significant DNA damage among cases may be related to the types of malformations and also their clinical condition.

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#### 17. A Morphometric Study Of Variations In The Innervation Of Pronator Teres With Its Clinical Implications

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**Introduction:** The median nerve innervates the muscles of the forearm and hand. Variations in the number of branches