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### Anatomical assessment of orbital dimensions using adult dry skulls



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**Aims and objectives:** Direct measurement of dimensions of orbits on adult dry skulls and assessment of orbital index which will act as a guiding principle for surgeons, anatomists as well as anthropologists and forensic experts.

**Material and methods:** Orbital height and breadth were measured bilaterally and their orbital indexes were calculated on 40 adult dry skulls over a period of one year in the Department of Anatomy, IPGMER, Kolkata.

**Results:** The mean orbital height for the right and left sides were  $32.4 \pm 1.45$  mm and  $33.25 \pm 1.25$  mm, while orbital breadth was  $33.55 \pm 1.28$  mm and  $33.80 \pm 1.74$  mm respectively. The mean orbital indexes were 96.57 and 98.37 respectively for right and left side.

**Conclusion:** The data generated by this study will provide a deeper insight in the morphological disposition of anatomical relationship of the orbit, in the reconstructive surgical management of craniofacial fractures due to trauma or orbital pathologies as well as in the analysis of ethno-racial relationship used by surgeons, anthropologists and forensic experts.

#### Conflicts of interest

The authors have none to declare.

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### A morphological study of level of bifurcation of common carotid artery and branches of external carotid artery in adult human cadaver



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**Aims and objectives:** External carotid artery has eight named branches distributing to head and neck. The rich vascularity of most parts of head and neck (except brain and eye) is mainly maintained by external carotid artery through its branches. The detailed knowledge of external carotid artery and its branches is important for procedures like catheterization, radical neck dissection, reconstruction of aneurysms and carotid endarterectomy to prevent vascular accidents.

The aim of the study was to correlate level of carotid bifurcation with upper border of thyroid cartilage and to measure distances of origin of branches of external carotid artery from bifurcation.

**Material and methods:** Twenty formalin fixed adult human cadavers, obtained from the Department of Anatomy were dissected.

**Results:** The common carotid artery bifurcation was found most commonly below the level of bifurcation in 41.03% and at and above bifurcation was found in 38.46% and 20.51% respectively. Mean

distances of origin of eight branches of external carotid artery were measured. The most common variation found was linguo-facial trunk in 12 specimens (30.76%). The other variations found were common trunk for ascending pharyngeal artery and occipital artery in five specimens (12.82%) and thyrolingual trunk in one specimen (2.56%).

**Conclusion:** Knowledge about these variations is important for surgeons performing head and neck surgeries and also helpful for radiologists for diagnostic imaging of vascular lesions and for interventional procedures.

#### Conflicts of interest

The authors have none to declare.

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### Study of fingerprint patterns in hypertensive patients



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**Aims and objectives:** Hypertension with no definite cause is essential hypertension, which affects 90–95% of hypertensive patients. Dermatoglyphics is the study and analysis of the prints of epidermal ridges and their configurations. The approximate time of appearance and completion of epidermal ridges are 13th and 21st week of intrauterine life respectively. These ridges remain unchanged throughout the life except for parallel increment in size with the general growth. The present study aims to evaluate the fingerprint patterns in the hypertensive patients of Dhulikhel Hospital Kathmandu University Hospital, Dhulikhel, Kavrepalanchowk, Nepal.

**Material and methods:** A total of 1200 subjects were involved for the study; 300 essential hypertensive patients and 900 normal healthy persons as control. The fingerprints were taken by applying modified Purvis Smith method. Individuals suffering from any chronic skin diseases, permanent scars, congenital or acquired anomalies due to trauma on fingers were excluded from the study.

**Results:** There was higher frequency of loop (58.50%) in both hands of hypertensive male and female than normotensive male and female which was statistically highly significant ( $p=0.0002$ ). The frequency of whorl and arch was 30.79% and 5.92% respectively with least frequency of composite ((4.79%)) in hypertensive patients in both hands of either sex.

**Conclusion:** The present study shows higher frequency of loop pattern followed by whorl and arch with least frequency of composite pattern in hypertensive patients. Therefore, one can predict the possible hypertension in a person by observing fingerprints with higher number of loop pattern.

#### Conflicts of interest

The authors have none to declare.

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