CONCLUSION
Chapter – 7

CONCLUSIONS

Familiarity with the morphometric variations and morphometric details of human skull base foramina is relevant for Neurosurgeons, Radiologist, Physician and Anatomist. Precise knowledge of the topographical anatomy and morphometrical variations at the base of human skull structures and their morphometric values are crucial for safe surgery. Awareness of anatomical variants of skull base foramina is important for differentiating normal from potentially abnormal structures during radiological investigations and their morphometric values is necessary and detailed knowledge of morphological variations is also vital.

This study was carried out to bring some informative data in the measurements of foramen magnum, jugular foramen and hypoglossal canal to be more familiar with the anatomy and variations of this region in North Indian population.

From the present study we derived the following conclusions.

The most common shape of foramen magnum of dry human skulls and computed tomographic scans in North Indian population was oval which was in 44.95% skulls and 37.58% scans respectively.

Anterior Hypoglossal Canal out of 347 (Right & left) samples while in the right side all canals are present 347 (100%) whereas the left side only one 1(0.29%) canal is absent, & 346 (99.71%) present (Table no. 5.4).

Posterior Hypoglossal Canal out of 347 (Right & left) samples while in the right side 267 (76.95%) is present & 80 (23.05%) canals is absent whereas the left side present 260 (74.93%) is present & 87 (25.07%) canal is absent (Table no. 5.5).

Mean anteroposterior diameter of foramen magnum on dry human skulls and patient’s computed tomographic scans was found to be 34.202 ±2.47mm and 35.22±3.31 and (p=0001) highly significant as the p value was less than 0.05 (Table no. 5.2).
The mean transverse diameter of foramen magnum on dry human skulls and patient's computed tomographic scans was 28.36±2.08 mm and 28.80 ±3.09 mm (Table no. 5.2).

In dry human skulls the mean area of the foramen magnum was found to be 763.37±96.41mm² whereas in computed tomography scans it was 831.52±147.44 mm² (Table no. 5.2).

The mean mediolateral diameter (MLD) of the Jugular foramen on right and left side was found to be 15.52 ±1.98 mm and 14.38±1.96 mm respectively (Table no. 5.3).

The mean anteroposterior diameter (APD) of the Jugular foramen on Rt. and Lt. sides were found to be 9.36±1.50 mm and 7.70±1.64 mm respectively (Table no. 5.3).

The mean anteroposterior diameter of the anterior hypoglossal canal on the right and left side was 4.72 ±0.74 mm and 4.23±0.67mm respectively (Table no. 5.6).

The transverse diameter of anterior hypoglossal canal measured on right and left was 5.19±0.88 mm and 5.32±0.85 mm respectively (Table no. 5.6).

The mean anteroposterior diameter of the posterior hypoglossal canal on right and left side was found to be 2.51 ±1.59 mm and 2.49±1.66 mm respectively (Table no. 5.7).

The transverse diameter of posterior hypoglossal canal measured on the right and left was 3.18±1.34 mm and 2.49±1.66 mm respectively (Table no. 5.7).