SUMMARY AND CONCLUSION

The ethmoid bone is one of the most complicated structures in the human body, and its anatomy is very complex.

A brief review of the available literatures on this structure in man and dog is given.

A comprehensive description of crista galli, cribriform plate, perpendicular plate and ethmoidal labyrinth is given.

The present work gives a precise study on the morphological features of the ethmoid bone in comparative study with that of the dog.

The morphological study of both man's and dog's ethmoid bone was done using ten fresh dried skulls of human being, and other ten fresh dried skulls of adult dogs.

The sense of smell in carnivora especially dogs affords an adequate area for the purposes of olfaction in comparison to man. This was proved by our study in the following points which also show the aspects of difference of the ethmoid bone in man and dog :

- Projection of the nose of the dog anteriorly.
- Great length of the nasal cavity in the dog.
- The ethmoid bone of man lies between the two orbits while in the dog it is situated between the maxillary bones.
- The ethmoid bone in man is cuboidal in shape, while in the dog it is elongated.

- The crista galli is well developed in man while in dog it is rudimentary low crest.
- The perpendicular plate is triangular in shape and lies more anteriorly in dog, while in man it is rectangular in shape and lies posteriorly.
- The cribriform plate in man extends from the frontal bone anteriorly to the sphenoid bone posteriorly, while in the dog it extends from the inner plate of the medial chamber of the frontal sinus dorsally, to the inner plate of the presphenoid bone ventrally.
- The forward protrusion of the nose of the dog pulling with it the midline of the cribriform plate causing it to be concave in shape, pulling also the frontal bone antro-ventrally and the sphenoid bone antro-dorsally. Hence the frontal sinus is expanded and formed from medial and lateral chambers and the sphenoid bone consists of pre and basisphenoid.
- The cribriform plate in man is elongated while in the dog it is deep and concave.
- The lamina cribrosa in man is narrow with few foramina in contrary with that of the dog where it is broad, wide, with great surface area and contains numerous perforations .
- The ethmoidal labyrinth in man consists of ethmoidal air cells while in the dog it consists of endo and ectoturbinates. Each turbinate is convoluted to provide a wide surface area for the olfactory mucosa.
- The turbinate bones extend into the cavity of the frontal sinus and the presphenoid bone in the dog, this in turn increase the available surface with olfactory extensions.