

Study of Different Methods of Mounting a Human Skull

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Abstract: Study of individual bones of the human skull is one of the most fascinating topics in the medicine field. The human skull contains a plethora of bones and each bone contains a plethora of parts which are assigned with specific functions. The bone size ranges from the large frontal, parietals and occipital to minute vomer and nasal bones. Some bones are fragile like ethmoids and some bones are rock solid like petrous part of temporal bones. As a medicine student it is important to know each and every part of the individual bones in order to know the functions and also to understand the spatial orientation of all these bones. This study was done in the Department of Anatomy, DM-WIMS, Meppadi, Kerala. Mounting a human skull using fishing wire against the white background defines the spatial orientation of each and every bones in the human skull.

Keywords: Bones, Ethmoid, Fishing wire, Mounting, Vomer.

1. Introduction

Study of individual bones of the human skull is one of the most fascinating topics in the medicine field. The human skull contains a plethora of bones and each bone contains a plethora of parts which are assigned with specific functions. The bone size ranges from the large frontal, parietals and occipital to minute vomer and nasal bones. Some bones are fragile like ethmoids and some bones are rock solid like petrous part of temporal bones. As a medicine student it is important to know each and every part of the individual bones in order to know the functions and also to understand the spatial orientation of all these bones.

In the present scenario in the medical education little importance is being given to understand individual bones that form the skull because of the shortage of time and also lack of skilled technicians in the Department of Anatomy. The knowledge of how to mount a skull is being lost slowly but surely in this part of the world. The present study aims to study the different ways to mount the skull and to find out the very best method to do so. The present study throws some light on different methods and the best method which is easy and also cost effective to disarticulate the skull.

2. Materials and Methods

This study was done in the Department of Anatomy, DM-WIMS, Meppadi, Kerala using 8 skulls. The first skull was cleaned and each and every individual bone was named with a permanent marker and was mounted on a glass slab. The second skull was cleaned and each and every individual bone was painted in different colours. The third bone was disarticulated and each individual bone was mounted separately on a steel rod on a fixed stand. The fourth bone was disarticulated and was fixed using fishing wires in a three dimensional pattern to a fixed box.

3. Result

The first method was easy to be done. The names were inscribed on the individual bones. In addition to plaques, there are many variations of skull hooks or hangers that attach to your wall and have a protruding hook that is inserted into the brain cavity. This allows you to hang just the skull with the wall as a background [1].



Figure 1: Showing the non-disarticulated skull where the individual bones have been labeled.

In the second method the skull was painted and was very pleasant to look at.



Figure 2: Showing the non-disarticulated skull where the individual bones have been coloured.

The third method was very tough. This method also known as Beauchêne [2] is a very famous method.



Figure 4: Figure showing the mounting of the disarticulated skull using fishing wire.

4. Discussion

The first method was easy to be done. But all the bones were not visible and the glass slab mounting did not help the matter much. In the second method the skull was painted and was very good to look but a lot of skulls was needed to make a good display of the individual bones from every angle. The third method was very tough because the mounting of lot of bones in a very limited space and the



Figure 3: Figure showing mounting of the disarticulated skull on a stand.

The fourth method was the easiest and the most convenient way to display the whole set of bones in a three dimensional view.

balance had to be precise to make the whole model stand. We never succeeded in getting the right balance. But the idea was to mount a skull somewhat in this way as seen in the picture. The fourth method was the easiest and the most convenient way to display the whole set of bones in a three dimensional view.

5. Conclusion

Displaying the disarticulated skull with the help of fishing wires gives the three dimensional orientation of each and individual bones in the human skull. It is a new method. The method is very useful especially for beginners who find it very difficult to understand the basics of the osteology and to make them understand using this model is always satisfactory.

References

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- [2] Spinner RJ¹, Vincent JF, Wolanskyj AP. Discovering the elusive Beauchêne: the originator of the disarticulated anatomic technique. *Clinical Anatomy*; 2011; (24), 7; 797–801, 2011.

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