www.jahm.in

(eISSN: 2321-1563)

DEMO REPORT

METHOD OF PREPARING AN ANATOMY MODEL

Tanvi Mahajan[1] Bhosgikar Anup[2] Shelly Divyadarshan[3] Ashwini Kumar[4] NG Mulimani[5]

[1]2nd year P.G Scholar [2]Lecturer [3] Reader [4] Reader [5] Professor & H.O.D, Department of Rachana Shareera, NKJAMC & P.G Center, Bidar, Karnataka, India

Corresponding author email: tanu6862@gmail.com

Access this article online: www.jahm.in

Received on: 11/06/14, Revised on: 29/06/14, Accepted on: 05/07/14

SUMMARY

The pivotal position of anatomy in understanding the concepts of medicine is undeniable. The enormous advances in information and technology have changed the trends of 21st century medical education. Today, numerous means and resources are available to study gross anatomy. In these times of rapid pedagogical metamorphosis, the impact, significance and feasibility of numerous anatomy teaching-learning aids remains an issue for reflection. There are numerous modes of anatomy demonstration, each have their own unique advantages and disadvantages; one among them is model demonstration. The aim of this paper is to demonstrate the method of preparing the models which will help the teachers to explain the subject in better way and help the students to understand the topic.

Key Words: Anatomy, Advantages, Model demonstration

INTRODUCTION

Anatomy is one of the fundamental topics in medical education. By learning gross anatomy, medical students get first impression of the structure of the normal human body, which is the basis for understanding pathological and clinical problems. It's very difficult for the students to imagine all the structures during study, so for the easy understanding of this subject, we have to use various teaching aids. One such attempt is made in our institute for easy understanding of the subject of *Marma Shareera* (vital points) by preparing the model. We made a P.O.P. (Plaster Of Paris) model to show *Adhoshakhagata Vaikalyalara Marmas* (vital points of lower limb causing deformity). The intension of this model is to show the anatomical structures involved under *Vaikalyakara Marmas* for better understanding of their *vidha laxanas* (injurical symptoms).

OBJECTIVE: To explain elaborately the *Vaikalyakara marmas* in the lower limb on POP model supported by electronic circuit of LED for better understanding of their *vidha laxanas.*

MATERIAL & METHODS:

- POP + POP Cement
- Original bones of right lower limb (Femur, Tibia, Fibula, Patella And Bones of Foot)
- Rubber pipes with LED circuits
- Silicon
- Acrylic board fixed with LED indicators
- Thermacol / Foam leather
- Oil paints
- 9 V Battery

- Time Required – 10 Days

Our plan was to make POP model of lower limb to show the *Adhoshakhagata Vaikalyakara marma* with the internal anatomical structures involved in the formation of each individual marma. Hence first step was to make the skeleton of the model, so POP was applied over a right lower limb of simulator (dummy model) for making a skeleton of lower limb.

Fig 1: Shows the POP cast on the right lower limb of Simulator.

This POP was very carefully cut, separated and removed from simulator after taking a cut on the lateral and medial side along the longitudinal axis to receive the limb in two halves i.e. upper and lower half.

Now the biggest challenge faced during model preparation is to fill the hollow space between upper and lower half of POP cast. Then we thought of taking skeleton of lower limb i.e. Femur, Tibia, Fibula & Bones of the Foot and joined the articular surfaces of these bones with each other by using silicon sealant.

Afterwards the surfaces of the bone are covered with thermacol and POP according to the shape of the cavity except at joints and affix these bones on lower half of the POP cast. After fixation of the bones, arrangement of all the muscles and vessels on the anterior aspect of the bony cast according to their anatomical position was done.

Fig 2: Shows the bones covered Thermaol and POP

Fig 3: Shows fixing of bones on the posterior half of POP cast

All the muscles were made with the help of thermacol and POP. All the ligaments and tendons are made with the help of POP only. The blood vessels are made with rubber pipes filled with red and blue color LED lights. The nerves are made with the help of nylon thread. After making all the structures, we painted them and fix these anatomical structures on the bony cast according to their anatomical location in that specific marma. The next difficulty faced was that to make these anatomical structures visible, so we thought of cutting windows on the upper half of the POP cast according to the location of marma points. Here the sizes of the windows are increased to show the anatomical structures clearly.

Fig 4: Shows the structures coming under *marma* point

When the whole ground work is done, the two separate halves were joined by putting POP cast again and finishing work was done. When the POP cast dried up, oil paints were used to give different shades of skin to make it look nearer to natural limb.

Fig 5: Shows the painting of the model.

Lastly, the acrylic board was arranged along with the model to write the references of *vaikalyakara marmas* and LED indicators were fixed to show the references concerned to the specific *marmas* which were arranged on the POP model.

Fig 6: Shows the image of a model, presented in Model competition at Alvas's shareera – 2014 and won 1st Prize in the competition

CONCLUSION

Images (3D) can be shown by using different model for better understanding of the topic and subject which makes model very important teaching aid as compared to other teaching aids.

Acknowledgement: We are extremely thankful to Dr. V.S Patil (Medical Director), Dr. Ambiah Devara (Principal), and the management for encouraging us and giving the opportunity to present this model in the National workshop- Alva's Shareera 2014.

Cite this article as: Tanvi Mahajan, Bhosgikar Anup, Shelly Divyadarshan, Ashwini Kumar, NG Mulimani. method of preparing an anatomy model. *J of Ayurveda and Hol Med (JAHM)*; 2014;2(6):64-66

Source of support: Nil, Conflict of interest: None Declared