Anatomica-AIMS

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Dr.Samridhi Puri

INSIDE THIS ISSUE:

A Message from the editor

A very happy and prosperous new year to all our readers. I am extremely happy to present the latest issue of Anatomica AIMS and to share with you the goings on in our department over the past year.

2016 was a busy and fruitful year for us, where we hosted a National level workshop on 'Silicon model making' which was a tremendous hit among our peers earning plaudits for the department as well as for the institution largely due to the tireless efforts of my young comrades, Dr. Tejaswi, Dr. Asharani and Dr. Ajay.

Our undergraduate students performed exceptionally well in the RGUHS final examination pushing the overall pass percentage above 90% second time in a row. I congratulate them and wish them the very best for their future.

We conducted a one day anatomy orientation programme for primary, middle and high school teachers of Pandavapura taluk in association with Azim Premji Foundation.

The teachers were enthralled and inspired by the scientific teaching methods and aids they were exposed to and owed to adopt these good practices for the creation of a more knowledgeable and informed student community. We have also agreed to hold these orientation programs on a regular basis and hope to educate the teachers about human anatomy and contribute in the scientific education of young students.

"HUMAN ANATOMY ORIENTATION PROGRAMME" HELD ON 8TH DECEMBER 2016

Plastination with Silicone Compounds

Department conducted a hands-on workshop on plastination techniques using silicone products under the stewardship of Dr. Martin Lucas & Dr. Vinay kumar who has acquired a quasi rock star status in the field of model making!

LOW COST ANATOMY & EMBRYOLOGY TEACHING MODELS

(A Technique standardized & practiced in the Dept of Anatomy, AIMS. BG. NAgara-571448)

Dr. M. Surendra, Professor of Anatomy, AIMS. BG. Nagara

Mr. Kumar, Artist & Modeler, AIMS. BG. Nagara

Anatomy is a comprehensive, complex and subtle subject; our great esteemed teachers of yester years use to advice us “it is the subject to be learnt, but not to be taught”. Therefore to learn & understand the subject it is complementary to use the adjunct teaching aids like charts, computer projections, mannequins & models etc. However models are very effective teaching materials, especially in teaching embryology, where student has to think 3-Dimensionally to understand perfectly the concepts of development of organs & organ systems including the anomalies during embryogenesis

2–Dimensional diagrams and figures are not of much help in teaching this subject of embryology and also the Neuroanatomy. Many embryology models prepared using plaster of Paris and purchased from company suppliers are not error proof, with many unscientific depictions. In addition these models were of low quality, problem in handling, high cost, low durability in withstanding the wear & tare etc.

Therefore, we came across an idea of preparing high quality, cost effective better teaching models in our department. After repeated experimentation in the process of preparation, we were able to standardize & perfect this technique of modeling.

Technique:[Fig 1]

The diagrams of the models to be prepared were selected from the standard text books, atlases or other sources like computer images and photos. The selected diagram for modeling was drawn on the drawing paper or Xeroxed keeping in mind the size of the model to be prepared. This diagram was traced on to the tracing paper and subsequently copied on to, usually 3 mm thick white ivory board. Then the outline of the diagram was cut using a sharp craft knife. These cuttings together form the firm base to construct the model further. Generally a base of 1.5 cm thickness is ideally suited. So five layers of 3 mm thick ivory board cuttings of the diagram’s outline were glued together with proper orientation using a good quality paste mixed with fine powder of copper sulphate, an antifungal agent or synthetic resin like Fevicol.

The second stage of preparation requires careful study of the selected diagram and proper planning. The required number of outline of the various components of the diagram presenting fine details were traced separately using 0.5mm thick ivory cord board. These important components of the diagram traced, were carefully cut with craft knife. These cut pieces help in creating cavities, curvatures and gaps etc. in the model and also to get the desired contour and even certain degree of dimension of the depth in the model. The cut pieces of the card board drawings were pasted with one another and later fixed to the base prepared earlier, aligning each piece properly and applying good quality glue liberally mixed with copper sulphate. Proper pressure applied for effective adhesion. On completion of stacking the cutouts, using the glue, the edges of the dried model was smoothened wherever necessary with fine sand paper and file. This procedure of smoothening the models also enhances the contour of the model.

Further the dried unfinished model was mounted on a plywood sheet of suitable size using fevicol. Finally the model was painted with two coats of good quality wood primer. When the primer dries further two coats of white oil paint applied. The model was allowed to dry properly. Then suitable oil paints of different colours used to paint the model (single coat) to depict various structures following the anatomical colour code. Finally a sigle coating of touch wood applied. [Fig 2]

Benefits of the Technique:

Compared to conventional Plaster of Paris models this technique of reconstruction has many advantages.

1. Quality: very intricate structures and scientific details can be shown in these models.
2. Preparation time: is considerably reduced.
3. Cost effective: The materials used are very cheap and affordable.
4. Handling: Models prepared by this technique are relatively very light and able to withstand the rough handling mainly by students.
5. Durability: a) As the handling becomes easier; so less prone for wear and tear damages and lasts longer.
   b) Water, fungal and insect resistant, because of antifungal glue and multiple coatings of paints used. In addition fading of the colors occurs very slowly.
6 .Display and storing: The sleek models can be stored comfortably and easy to display in the museums etc.
7. Cleaning: Simple, with a moderately wet cloth and paintable whenever necessary.

Fig 1. Some stages in the preparation of the model showing the development of pancreas and biliary apparatus

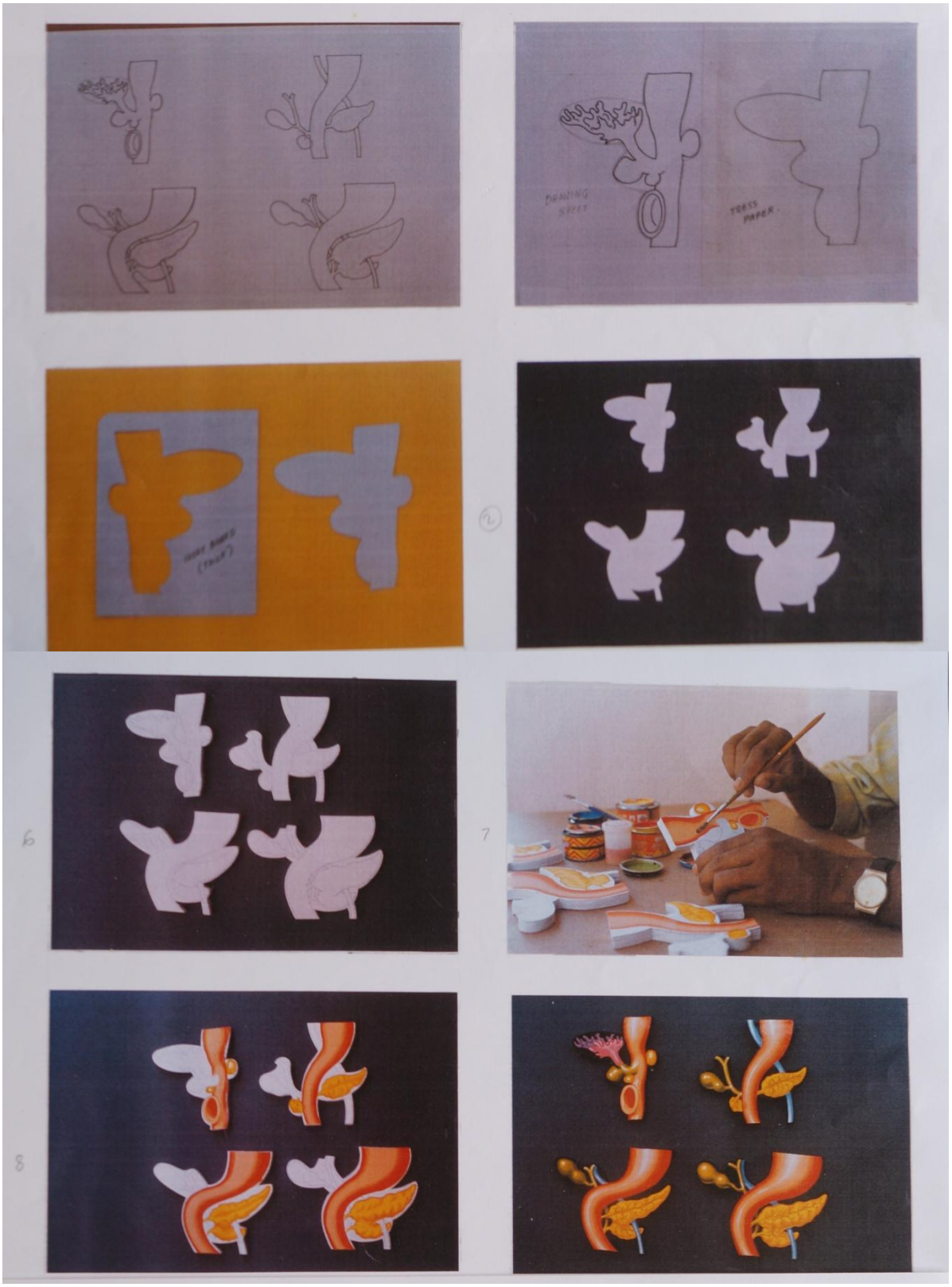
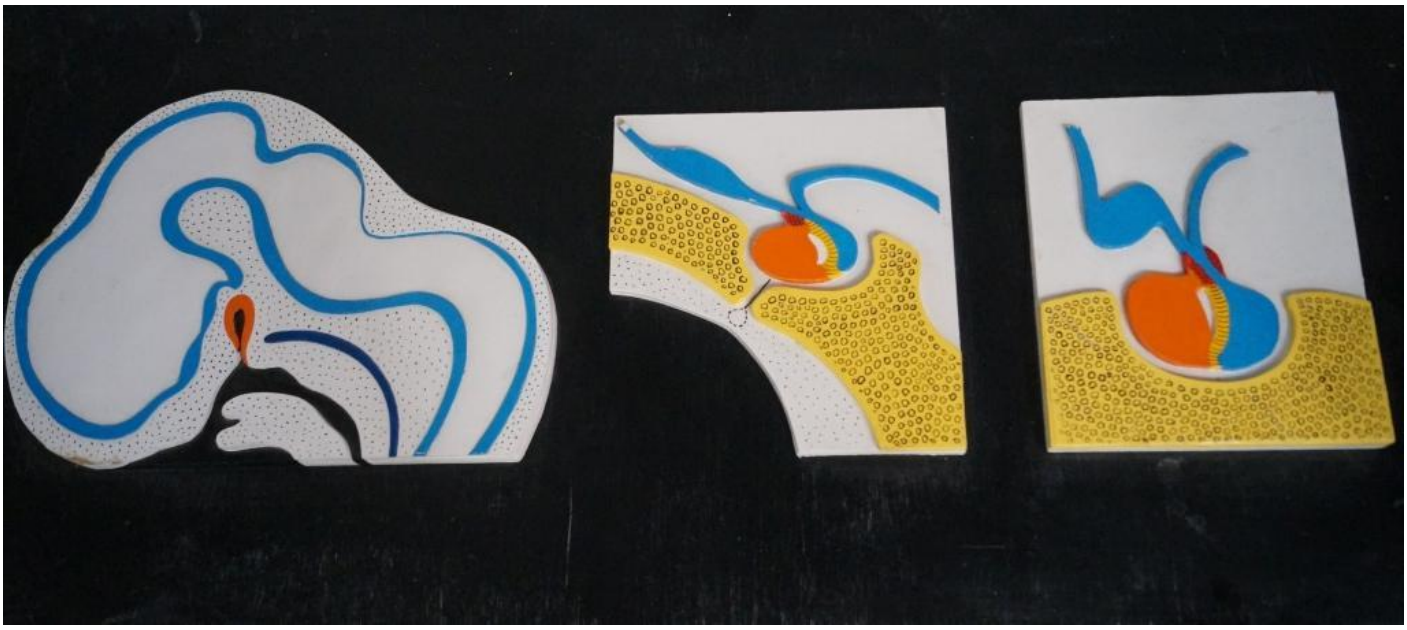
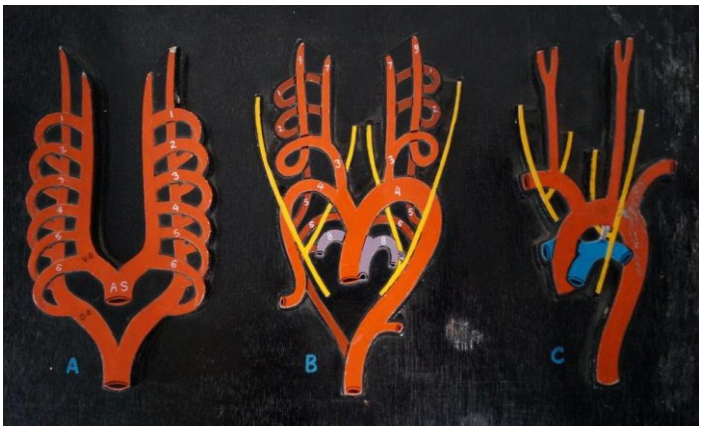


Figure 2 – Completed models



2. A : Model depicting the development of hypophysis cerebri

2. B: Development of cartilagenous components of the pharyngeal arches



2. C: Development of aortic arches and their fate

Department Profile

Conference

1. Dr. Tejaswi H L, Dr. Asharani S K, Dr. Thejeshwari H G & Dr. Ajay N attended 18th Karnataka Chapter of Anatomists State Conference, held on 10th and 11th September 2016 at JSS Medical College, Mysore.

2. Dr. Tejaswi H L attended 64th National Conference of Anatomical Society of India held at AIIMS, Jodhpur from 29th November to 1stDecember, 2016.

New staff

Dr. Samridhi (Puri) Arora

Our new Assistant Professor who graduated from JNMC, Belgaum and did her post graduation from MAMC, Agroha, Hisar,Haryana.

Recognition

The Medical Council of India has recognized MD/MS Anatomy qualification for two seats granted by Rajiv Gandhi University of health Sciences, Bangalore in respect of students being trained at Adichunchanagiri institute of medical Sciences, B G Nagara.

Paper presentation

1. Dr. Asharani S K – The study of nutrient foramen of humerus in 18th Karnataka Chapter of Anatomists State Conference, held on 10th and 11th September 2016 at JSS Medical College, Mysore.

2. Dr. Thejeshwari H G - The study of BMI in junk food eaters of both the sexes in south Indian population of the age 18 to 20 years in 18th Karnataka Chapter of Anatomists State Conference, held on 10th and 11th September 2016 at JSS Medical College, Mysore.

Publications

1. Jain RA, Lokanathan TH. The relationship between the deep fibular nerve and the dorsalis pedis artery in the anterior tarsal tunnel: a cadaveric study. Anatomy Journal of Africa 2016; 5(2): 811 -6.

2. Asharani S K, Ningaiah A. A study on the nutrient foramen of humerus. International Journal of Anatomy and Research 2016; 4(3): 2706-9.

3. Manjunath CS, Lokanathan TH. Anatomical variations in the origin of superior thyroid artery and its clinical significance. International Journal of Anatomy and Research 2016; 4(3): 2656-8.

4. Thejeshwari HG, Rajendra R. The study of BMI in junk food eaters of both the sexes in the age group 18 to 20. Indian journal of Anatomy 2016: 5(3); 303-6.

Resource person

Dr. Asharani S K, Dr. Thejeshwari H G & Dr. Ajay N were speaker in “Human Anatomy Orientation Programme” held on 8th December 2016.

Dr. Tejaswi H L

1. Panelist in panel discussion “Evolution in teaching Anatomy” at 18th Karnataka Chapter of Anatomists State Conference, held on 10th and 11th September 2016 at JSS Medical College, Mysore.

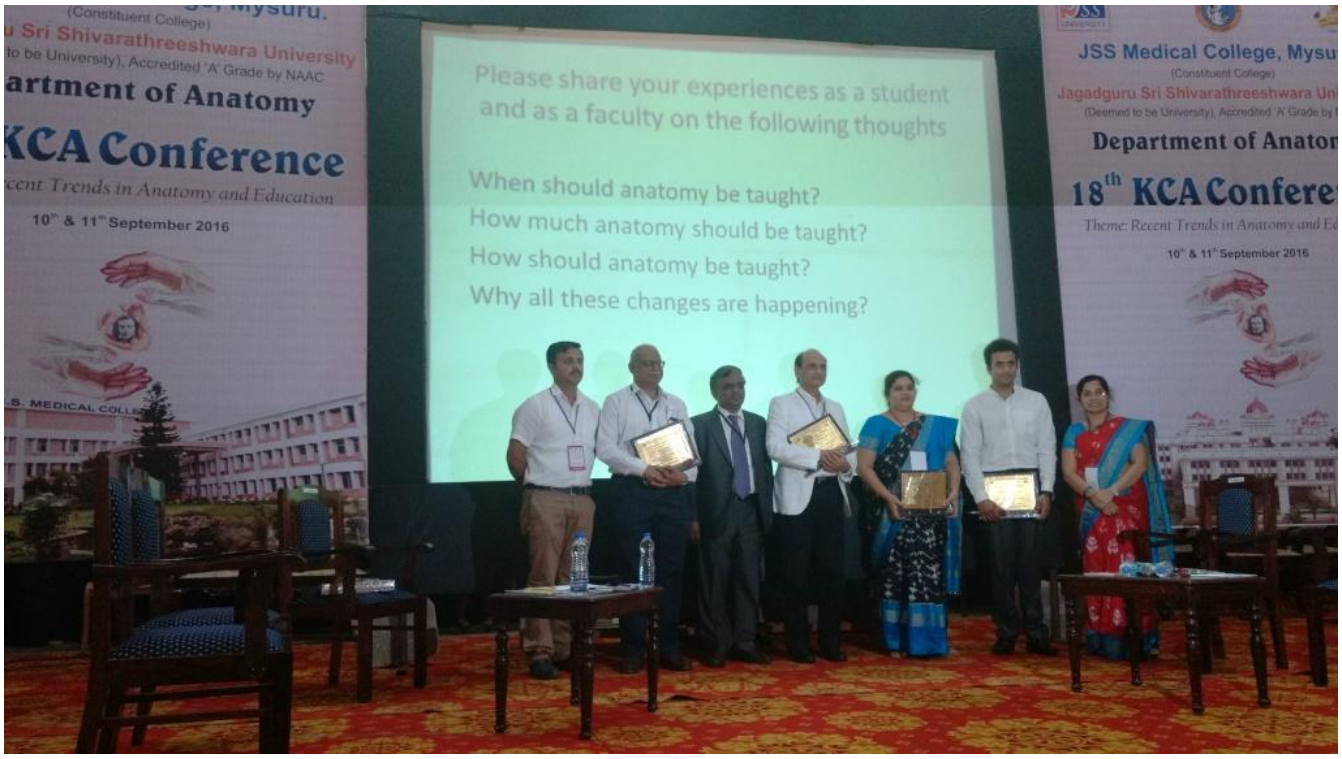
2. Speaker in the “Revised Basic MET Workshop” held 22nd to 24th November 2016.

3. Speaker in “Human Anatomy Orientation Programme” held on 8th December 2016.

Upcoming events

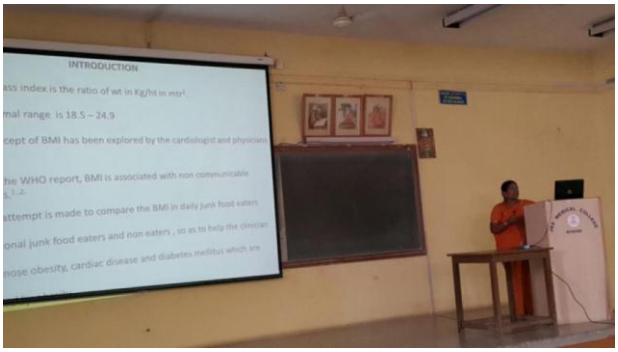
1. Guest lecture on Human Anatomy – Newer approach by Dr. Nachiketh Shankar on 16th January 2017.

2. Teacher orientation programme in association with department of education, Mandya and Azim Premji foundation on 7th February 2017.



Dr. Tejaswi H L – Panelist in 18th KCA conference held at JSSMC, Mysore

Dr. Asharani S K – Oral presentation in 18th KCA conference held at JSSMC, Mysore



Dr. Thejeshwari H G – Oral presentation in 18th KCA conference held at JSSMC, Mysore