3rd NATIONAL CONFERENCE OF SOCIETY OF CLINICAL ANATOMISTS

THEME:
ADVANCING CLINICAL ANATOMY EDUCATION AND RESEARCH

CONFERENCE DATES:
24th & 25th MAY 2014

VENUE:
The Sunway GRT Grand Hotel,
155/D, 100 feet Road, Puducherry
Ph: 0413 – 2281608, 9600234567

ORGANISED BY
Society of Clinical Anatomists
### ORGANISING COMMITTEE

<table>
<thead>
<tr>
<th>Role</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advisory Committee</strong></td>
<td>Dr. R. Ramachandra Rao (Pondy)</td>
</tr>
<tr>
<td></td>
<td>Dr. Shailaja Shetty(Bangalore)</td>
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<td></td>
<td>Dr. Gaurav Agnihotri (Amritsar)</td>
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<td></td>
<td>Dr. A. Amar Jayanthi (Thrissur)</td>
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<td></td>
<td>Dr. Geeta Das (Guwahati)</td>
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<tr>
<td><strong>Organising Chairman</strong></td>
<td>Dr. WMS. Johnson (Chennai)</td>
</tr>
<tr>
<td><strong>Organising Co Chairs</strong></td>
<td>Dr. S. Ratnasamy (Pondy)</td>
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<td></td>
<td>Dr. S. Aruna (Pondy)</td>
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<tr>
<td><strong>Organising Secretary</strong></td>
<td>Dr. M. Sivakumar (Pondy)</td>
</tr>
<tr>
<td><strong>Joint Organising Secretary</strong></td>
<td>Dr. K. Praveen (Pondy)</td>
</tr>
<tr>
<td><strong>Treasurer</strong></td>
<td>Dr. K. Anup Rao (Pondy)</td>
</tr>
<tr>
<td><strong>Chair Person of Scientific Committee &amp; Souvenir in charge</strong></td>
<td>Dr. Gunapiya Raghunath (Chennai)</td>
</tr>
<tr>
<td><strong>Co chair of Scientific Committee</strong></td>
<td>Dr. R. Vijaya</td>
</tr>
<tr>
<td><strong>Public Relations</strong></td>
<td>Dr. D. Ravichandran (Coimbatore)</td>
</tr>
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<td></td>
<td>Dr. E. Kamala (Trichy)</td>
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<td></td>
<td>Dr. T. Karthikeyan (Chennai)</td>
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<td></td>
<td>Dr. Kafeel Hussain (Chennai)</td>
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<td>Dr. K. Vengadachalam (Pondy)</td>
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<tr>
<td><strong>Reception Committee</strong></td>
<td>Dr. G. Durga Devi Yashwanth (Chennai)</td>
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<td></td>
<td>Dr. G. Prabavathy (Pondy)</td>
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<td>Dr. J. Sarasu (Pondy)</td>
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<td></td>
<td>Dr. V. Gladwin(Pondy)</td>
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<td>Dr. Suman Verma (Pondy)</td>
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<td></td>
<td>Dr. Sriram (Pondy)</td>
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<td>Dr. Santhosh (Pondy)</td>
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<td>Dr. Nedunchezhan.S (Pondy)</td>
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<tr>
<td><strong>Programme Co ordinators</strong></td>
<td>Dr. Magi Murugan (Pondy)</td>
</tr>
<tr>
<td></td>
<td>Dr. Dinesh Kumar (Pondy)</td>
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<td></td>
<td>Dr. Isaivani (Pondy)</td>
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<td>Dr. Sangeetha (Pondy)</td>
</tr>
</tbody>
</table>
## SCIENTIFIC COMMITTEE

<table>
<thead>
<tr>
<th>Subject</th>
<th>Faculty Name and Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetics</td>
<td>Dr. N. Muthukumaravel (Salem)</td>
</tr>
<tr>
<td>Embryology</td>
<td>Dr. Daksha Dixit (Belgaum)</td>
</tr>
<tr>
<td>Gross Anatomy</td>
<td>Dr. M. Kavi Mani (Chennai)</td>
</tr>
<tr>
<td></td>
<td>Dr. K. Suba Ananthi (Pondy)</td>
</tr>
<tr>
<td>Clinical &amp; Radiological Anatomy</td>
<td>Dr. Deepti Shastri (Salem)</td>
</tr>
<tr>
<td>Histology</td>
<td>Dr. Hirak Das (Guwahati)</td>
</tr>
<tr>
<td>Osteology</td>
<td>Dr. K. Shanmuganathan (Pondy)</td>
</tr>
<tr>
<td>Medical Education</td>
<td>Dr. Jeyanthi Venkatiah (Bangalore)</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
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</tr>
<tr>
<td>8.30 - 9.30 am</td>
<td>Registration</td>
</tr>
<tr>
<td>9.30 am</td>
<td>Invocation song: <strong>Dr. Sriram, Radhika, Neha</strong></td>
</tr>
<tr>
<td>9.35 am</td>
<td>Welcome address by <strong>Dr. W.M.S. Johnson</strong>, Organizing Chairman</td>
</tr>
<tr>
<td>9.45 – 10.45 am</td>
<td>Lighting of Lamp and Inauguration of conference</td>
</tr>
<tr>
<td></td>
<td>Felicitation of the conference by Dr. Daksha Dixit, Vice-President, Society of clinical anatomists, Dr. Ravichandran, General secretary, Society of clinical anatomists and Dr. Muthukumaravel, Editor-in-chief, Society of clinical anatomists. Assoc Prof, Annapoorna Medical College, Salem. Plenary Lecture on “Improving Quality of Anatomy Education to meet MCI objectives” by: <strong>Dr. T.S. RAVIKUMAR</strong>, DIRECTOR &amp; CEO, JIPMER.</td>
</tr>
<tr>
<td>10.45 – 11.00 am</td>
<td>Tea break</td>
</tr>
<tr>
<td>11 – 12 noon</td>
<td>Plenary Lectures:</td>
</tr>
<tr>
<td></td>
<td>1. “Dynamics of supports of female urogenital tract: Clinical applications” by <strong>Dr. Gowri Dorairajan</strong>, Prof of OBG, JIPMER</td>
</tr>
<tr>
<td></td>
<td>2. Foetal Anatomy: Updates and Utility:</td>
</tr>
<tr>
<td></td>
<td>By <strong>Dr. K. Manikandan</strong>, Assoc. Prof of OBG, JIPMER</td>
</tr>
<tr>
<td>12 noon</td>
<td>Vote of thanks by <strong>Dr. M. Sivakumar</strong> and distribution of appreciation certificates to organizing committee</td>
</tr>
<tr>
<td>Time</td>
<td>Activity</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12 – 1 pm</td>
<td>General body meeting (only for members of SOCA)</td>
</tr>
<tr>
<td>1 – 2 pm</td>
<td>Lunch</td>
</tr>
<tr>
<td>2 pm onwards</td>
<td>Oral &amp; Paper Presentations</td>
</tr>
</tbody>
</table>

## PROGRAMME - 25th May 2014

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 - 10 am</td>
<td>Guest Lecture on “Relevance of Early Clinical Exposure in Basic Science Teaching” by Dr. AGNES MATHEW, Professor of OBG</td>
</tr>
<tr>
<td>10.00 – 10.45 am</td>
<td>Oral presentations</td>
</tr>
<tr>
<td>10.45 – 11 am</td>
<td>Tea break</td>
</tr>
<tr>
<td>11 am onwards</td>
<td>Oral presentations</td>
</tr>
<tr>
<td>1 – 2 pm</td>
<td>Lunch</td>
</tr>
<tr>
<td>2 pm – 4.30 pm</td>
<td>Oral presentations</td>
</tr>
</tbody>
</table>
4.30 pm  |  Valedictory function

<table>
<thead>
<tr>
<th>S.No</th>
<th>TITLE</th>
<th>PRESENTING AUTHOR</th>
<th>COLLEGE</th>
</tr>
</thead>
</table>

ORAL PRESENTATIONS

24.05.2014  2.00 pm to 3.00 pm  Hall – 1

CHAIRPERSONS: Dr. Daksha Dixit,  Dr.T.C.Singel
<table>
<thead>
<tr>
<th>S.No</th>
<th>Title</th>
<th>Presenting</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Study of the distribution of different types of cleft lip &amp; palate</td>
<td>Dr. Alpana Burman</td>
<td>Silchar Medical College, Assam</td>
</tr>
<tr>
<td>2</td>
<td>Ponticulus Posticus</td>
<td>Dr. Anupama . K</td>
<td>M.S. Ramiah MC, Bangalore</td>
</tr>
<tr>
<td>3</td>
<td>Origin of Accessory left gastric artery from proper hepatic artery</td>
<td>Dr. Lesitha.T</td>
<td>M.S. Ramiah MC, Bangalore</td>
</tr>
<tr>
<td>4</td>
<td>A study of openings of hepatic veins into the retro hepatic segment of inferior vena cava in Indian population</td>
<td>Dr. Veena Vidya Shankar</td>
<td>M.S. Ramiah MC, Bangalore</td>
</tr>
<tr>
<td>5</td>
<td>Bilateral accessory heads of biceps brachii with its clinical importance</td>
<td>Dr. Snigdha Das</td>
<td>M.S. Ramiah MC, Bangalore</td>
</tr>
<tr>
<td></td>
<td>Title</td>
<td>Author</td>
<td>Location</td>
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<tr>
<td>6.</td>
<td>Classification of plantar arterial arch based on its formation</td>
<td>Dr. Anupama.K</td>
<td>M.S.Ramiah MC Bangalore</td>
</tr>
<tr>
<td>7.</td>
<td>Case based teaching method is an alternative</td>
<td>Dr. Mundra Janardhan Rao</td>
<td>Mamata MC Khammam,A.P</td>
</tr>
<tr>
<td>8.</td>
<td>Effect of cell phone radiation on hippocampal neurons of mice- a histomorphometric study</td>
<td>Dr.Mugunthan</td>
<td>Mahatma Gandhi Medical College &amp; Research Institute, Puducherry</td>
</tr>
<tr>
<td>9.</td>
<td>Morphological study of papillary muscle of left ventricle of human heart</td>
<td>Dr.Hrishikesh Talukdar</td>
<td>Gauhati Medical College</td>
</tr>
<tr>
<td>10.</td>
<td>Extra muscle on dorsum of hand-a correlation with evolution</td>
<td>Dr. Indira C.K</td>
<td>Govt.Medical College, Thrissur</td>
</tr>
<tr>
<td>11.</td>
<td>Morphology of infraorbital foramen in South Indian region</td>
<td>Dr. Vishal Kumar</td>
<td>K.S.Hegde Medical Academy,Mangalore</td>
</tr>
</tbody>
</table>

**ORAL PRESENTATIONS**

24.05.2014 4.00pm to 5.00pm  HALL : 1

CHAIRPERSONS: Dr. Deepti Shastri  Dr. Amar Jayanthi
<table>
<thead>
<tr>
<th>S.No</th>
<th>TITLE</th>
<th>PRESENTING AUTHOR</th>
<th>COLLEGE</th>
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</thead>
<tbody>
<tr>
<td>12.</td>
<td>Comparative histological study of oesophagi of mammals</td>
<td>Dr. G. Durgadevi</td>
<td>Sri Muthukumaran MCH &amp; RI, Chennai</td>
</tr>
<tr>
<td>13.</td>
<td>The appearance of ossification centres in sternum-</td>
<td>Dr. Gurdeep Singh Kalyan</td>
<td>Joint Director Medical Education &amp; Research, Punjab</td>
</tr>
<tr>
<td></td>
<td>A dimorphic study in North Indians</td>
<td></td>
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</tr>
<tr>
<td>14.</td>
<td>Observations on ossified pterygospinous ligament in skulls in south</td>
<td>Dr. Nirmala .D</td>
<td>JJM Medical College, Davangere</td>
</tr>
<tr>
<td></td>
<td>&amp; central Karnataka region</td>
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<tr>
<td>15.</td>
<td>A study of Rhomboid fossa &amp; mid shaft circumference of the clavicle</td>
<td>Dr. Shivarama .Ch</td>
<td>Yenepoya Medical College, Mangalore</td>
</tr>
<tr>
<td>16.</td>
<td>Morphometric study of foramen spinosum in South Indian skulls</td>
<td>Dr. Castor Shylla</td>
<td>Meenakshi Medical College &amp;RI Enathur</td>
</tr>
<tr>
<td>17.</td>
<td>Ossified petroclinoid ligaments in skulls in Karnataka region</td>
<td>DR. Nirmala . D</td>
<td>JJM Medical College,Davangere</td>
</tr>
</tbody>
</table>

**ORAL PRESENTATIONS**

24.05.2014  2.00 pm to 3.10pm  Hall : 2

CHAIRPERSONS: Dr. Jacinta Antony  Dr. Nalinakumari
<table>
<thead>
<tr>
<th>S.No</th>
<th>TITLE</th>
<th>PRESENTING AUTHOR</th>
<th>COLLEGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.</td>
<td>Techniques for demonstration &amp; characteristics of Pre Descemet’s layer of human cadaveric cornea</td>
<td>Dr. Umesan K.G</td>
<td>Govt.MedicalCollege, Thiruvananthapuram</td>
</tr>
<tr>
<td>19.</td>
<td>A comparative study of appearance of ossification centres of lower end of radius,ulna,carpals ,metacarpals &amp; phalanges in normal &amp;PEM children</td>
<td>Dr. A.Gnanavel</td>
<td>Meenakshi Medical College &amp;RI, Enathur</td>
</tr>
<tr>
<td>20.</td>
<td>Uncorrected Tetrology of Fallot surviving in his fourth decade</td>
<td>Dr. Arnab Ghosh</td>
<td>Silchar Medical College, Silchar, Assam</td>
</tr>
<tr>
<td>21.</td>
<td>An advanced study protocol for teaching cardiac anatomy in first year BPT</td>
<td>Dr. Mathivanan</td>
<td>PSG Institute of Medical Sciences &amp; Research, Coimbatore</td>
</tr>
<tr>
<td>22.</td>
<td>Clinical importance of superior radioulnar joint</td>
<td>Dr. Soorya Sridhar</td>
<td>Narayana Medical College, Nellore</td>
</tr>
<tr>
<td>23.</td>
<td>Intertubercular sulcus of Humerus&amp; its importance clinically</td>
<td>Dr. Siva Chidambaram</td>
<td>Narayana Medical College, Nellore</td>
</tr>
<tr>
<td>24.</td>
<td>Langer’s axillary Arch – A case report</td>
<td>Dr. K. Aruna</td>
<td>Thanjavur Medical College</td>
</tr>
</tbody>
</table>

**POSTER PRESENTATIONS**

24.05.2014      3.10 pm to 4.00pm    Hall: 2

**CHAIRPERSONS:** Dr. N.M. Suresh    Dr. Nirmala

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<tbody>
<tr>
<td>25.</td>
<td>Morphology &amp; Morphometry</td>
<td>Dr. Somesh M.S</td>
<td>Srinivas Institute of</td>
</tr>
<tr>
<td>S.No</td>
<td>TITLE</td>
<td>PRESENTING AUTHOR</td>
<td>COLLEGE</td>
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<tr>
<td>26.</td>
<td>Accessory Parotid gland- A case report</td>
<td>Dr. J.Gayathri</td>
<td>Thanjavur Medical College</td>
</tr>
<tr>
<td>27.</td>
<td>Honey comb lesion in nasopharyngeal roof</td>
<td>Dr. Umesan K.G</td>
<td>Govt. Medical College, Thiruvananthapuram</td>
</tr>
<tr>
<td>28.</td>
<td>Bilateral high division of Sciatic nerve</td>
<td>Dr. Arnab Ghosh</td>
<td>Silchar Medical College, Assam</td>
</tr>
<tr>
<td>29.</td>
<td>Apert’s syndrome- A case report</td>
<td>Dr. Alpana Burman</td>
<td>Silchar Medical College, Assam</td>
</tr>
<tr>
<td>30.</td>
<td>Absence of fissures in right lung</td>
<td>Dr. S. Supa devi</td>
<td>SRMC &amp; RI, Chennai</td>
</tr>
<tr>
<td>31.</td>
<td>Bilateral undescended testis</td>
<td>Dr. S. Monica Diana</td>
<td>SRMC &amp; RI, Chennai</td>
</tr>
<tr>
<td>32.</td>
<td>Study of incidence of the supracondylar process of the humerus among South Indians</td>
<td>Dr. Shantharam.V</td>
<td>Akash Inst. of Med. Sci. &amp; RI, Bangalore</td>
</tr>
<tr>
<td>33.</td>
<td>Unilateral incomplete bifid ureter</td>
<td>Dr. Vishal Kumar</td>
<td>K.S Hegde Medical Academy, Mangalore</td>
</tr>
</tbody>
</table>

**ORAL PRESENTATIONS**

25.05.2014  10.00am to 10.45am    Hall :1

**CHAIRPERSONS:** Dr. Gurdeep Singh Kalyan  Dr. Kalpana
<table>
<thead>
<tr>
<th>S.No</th>
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<th>PRESENTING AUTHOR</th>
<th>COLLEGE</th>
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</thead>
<tbody>
<tr>
<td>34.</td>
<td>Patterns of netsurfing in Govt. Medical College, Thiruvananthapuram</td>
<td>Dr. Umesan K.G</td>
<td>Govt. Medical College Thiruvananthapuram</td>
</tr>
<tr>
<td>35.</td>
<td>Morpho histological study of myocardial bridges</td>
<td>Dr. S. Nalinakumari</td>
<td>Chennai Medical College &amp; Research Centre, Trichy</td>
</tr>
<tr>
<td>36.</td>
<td>A computerised tomographic study of height of ethmoidal skull base</td>
<td>Dr. N. Vinaykumar</td>
<td>Chennai Medical College &amp; Research Centre, Trichy</td>
</tr>
<tr>
<td>37.</td>
<td>Role of Q angle in diagnosing Patello femoral pain syndrome</td>
<td>Dr. Umapathy Sembian</td>
<td>Chennai Medical College &amp; Research Centre, Trichy</td>
</tr>
</tbody>
</table>

**ORAL PRESENTATIONS**

25.05.2014   11.00am to 12.00 noon   Hall: 1

Chairpersons: Dr. G.B. Rairam  Dr. Muniyappan
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>38.</td>
<td>A study of morphology of air cells in the middle turbinate &amp; its association with sinusitis &amp; DNS</td>
<td>Dr. E.Kamala</td>
<td>Chennai Medical College &amp; Research Centre, Trichy</td>
</tr>
<tr>
<td>39.</td>
<td>Super resolution optical fluctuation imaging</td>
<td>Dr. Umesan K.G</td>
<td>Govt. Medical College Thiruvananthapuram</td>
</tr>
<tr>
<td>40.</td>
<td>A study of lateral lamella of cribriform plate</td>
<td>Dr. T.S. Gugapriya</td>
<td>Chennai Medical College &amp; Research Centre, Trichy</td>
</tr>
<tr>
<td>41.</td>
<td>Morphometric analysis of mental &amp; mandibular foramen</td>
<td>Dr. Diana Laishram</td>
<td>Vinayaka Missions Kirupananda Variyar Medical College, Salem</td>
</tr>
<tr>
<td>42.</td>
<td>A study on the variation of coeliac trunk-hepatic arterial system</td>
<td>Dr. G.Kalaivani</td>
<td>Vinayaka Missions Kirupananda Variyar Medical College, Salem</td>
</tr>
<tr>
<td>43.</td>
<td>Fraternal twins with single placenta- A case report</td>
<td>Dr. Laigy Paul</td>
<td>Vinayaka Missions Kirupananda Variyar Medical College, Salem</td>
</tr>
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</table>

**ORAL PRESENTATIONS**

25.05.2014 | 12 noon to 1.00pm | Hall: 1

**CHAIRPERSONS:** Dr. Usha Kothandaraman  Dr. Ratnasamy
<table>
<thead>
<tr>
<th>S.No</th>
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<th>COLLEGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.</td>
<td>Complete duplication of right great saphenous vein &amp; segmental duplication of left great saphenous vein</td>
<td>Dr. Mehandi V.Mahajan</td>
<td>Sri Muthukumaran Medical College, Chennai</td>
</tr>
<tr>
<td>45.</td>
<td>Multiple variations in the veins of head &amp; neck</td>
<td>Dr. Anupriya.A</td>
<td>Sri Muthukumaran Medical College &amp;RI,Chennai</td>
</tr>
<tr>
<td>46.</td>
<td>Multiple variations in the viscera &amp; vessels of the abdomen- A case report</td>
<td>Dr. Krishnamurthy J.V</td>
<td>Sri Muthukumaran Medical College &amp;RI,Chennai</td>
</tr>
<tr>
<td>47.</td>
<td>Recurrent Miscarriage</td>
<td>Dr. Veenalakshmi</td>
<td>SRMC,Porur</td>
</tr>
<tr>
<td>48.</td>
<td>Synostosis around shoulder joint</td>
<td>Dr. Rieyaz H.A</td>
<td>SRMC,Porur</td>
</tr>
<tr>
<td>49.</td>
<td>Absence of Internal carotid artery in brain among South Indian population-a cadaveric study</td>
<td>Dr. K.Mani</td>
<td>Sri Sathya Sai Medical College &amp; RI</td>
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ORAL PRESENTATIONS

25.05.14  2.00 pm to 3.00pm  Hall : 1

CHAIRPERSONS : Dr. C.K. Lakshmi Devi  Dr.S.S. Rajasekar
<table>
<thead>
<tr>
<th>S.No</th>
<th>TITLE</th>
<th>PRESENTING AUTHOR</th>
<th>COLLEGE</th>
</tr>
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<tbody>
<tr>
<td>50.</td>
<td>Innovative interactive clinical anatomy lectures for first year medical students</td>
<td>Dr. Kalpana Ramachandran</td>
<td>Sri Muthukumaran Medical College &amp; RI, Chennai</td>
</tr>
<tr>
<td>51.</td>
<td>Hemi sacralisation of fifth lumbar vertebrae - A case report</td>
<td>Dr. Asha.K</td>
<td>ESIC Medical College &amp; PGIMSR. K.K.Nagar, Chennai</td>
</tr>
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<td>52.</td>
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**ORAL PRESENTATIONS**

25.05.14  3.00pm to 4.00pm  Hall: 1

**CHAIRPERSONS:** Dr. T. Rajan  Dr. Muthukumaravel

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**ORAL PRESENTATIONS**

25.05.14  4.00pm to 4.30pm  Hall :1

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<td>Velammal Medical College, Madurai</td>
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1. STUDY OF THE DISTRIBUTION OF DIFFERENT TYPES OF CLEFT LIP AND PALATE - A case report

Barman A., Dutta B C., Sarkar. J.K,  
Department of Anatomy  
Silchar Medical College, Silchar, Assam.

Introduction: Cleft lip and palate is one of the most common of the congenital deformities. The typical distribution of cleft types is cleft lip alone (type I) 15%, cleft lip and palate (type II) 45% and isolated cleft palate (type III) 40%. Cleft lip with or without cleft palate predominates in male, whereas cleft palate alone is more common in females.

Aim & objective: To study distribution of different types of cleft lip and palate

Material & method: 40 patients of cleft lip and palate presented in Paediatrics and Surgery OPD from 1st July, 2012 to 31st Dec, 2013. Relevant history was taken, clinical examination were done.

Result and observation: Out of 40 cases, 20 cases (50%) were cleft lip and palate (type II) and 14 cases (35%) of cleft palate alone (type III) and 6 cases (15%) of cleft lip alone (type I). Males were found to predominate in type I and II. 5 out of 6 Type I and 14 out of 20 type II patients were found to be male. Females predominated in type III. 10 out of 14 cleft palate patients were found to be female.

Conclusion: The typical universal distribution of cleft types tallies with our results.

2. PONTICULUS POSTICUS- A CASE REPORT

Dr. Anupama K1, Dr. Shailaja Shetty2, Dr. Snigdha Das3, Dr. Angela Susan4. 
Assistant Professor1, Professor and Head2, Post graduate student3,4. 
M.S.Ramiah Medical College.Bangalore

Introduction: The atlas vertebra consists of two lateral masses connected by a short anterior and a longer posterior arch. The superior surface of the posterior arch bears a wide groove for the vertebral artery and the first cervical spinal nerve. An anomalous bony bridge between the posterior portion of superior articular process and the superior margin of the posterior arch of atlas is known as “Ponticulus posticus” and the foramen formed by it is known as “Arcuate foramen”.

Observation: During routine dissection for the undergraduate students it was found that there was a bony outgrowth over the third part of the vertebral artery converting the vertebral groove into a foramen.
**Conclusion:** Patients with ponticulus often show symptoms of vertebra basilar insufficiency such as headache, vertigo and diplopia. It can also be mistaken for broad posterior arch during surgeries which could cause injury to vertebral artery.

Hence knowledge of ponticulus posticus is very useful for the neurophysician, neurosurgeons and radiologist who deal with such patients.

**Key words:** Ponticulus posticus, Arcuate foramen, Vertebral artery, Vertebrobasilar insufficiency.

3. **ORIGIN OF ACCESSORY LEFT GASTRIC ARTERY FROM PROPER HEPATIC ARTERY- A CASE REPORT**

**Dr. Lesitha T1, Dr. Komala N2**
Post graduate student1, Associate Professor2
Department of Anatomy, M.S Ramaiah Medical College, Bangalore.

**Introduction:** Coeliac trunk, its main branches and its smaller branches show number of anatomical variations. One such variation is origin of accessory left gastric artery from proper hepatic artery. Awareness of the presence of accessory left gastric artery is of importance during the hepatic arterial infusion chemotherapy procedure. The chemotherapeutic agents infused through hepatic artery might reach the oesophageal and gastric mucosa which can lead to adverse effects.

**Case Report:** During routine dissection of coeliac trunk, for under graduate students of M S Ramaiah Medical College, in Department of Anatomy, we noted the presence of Accessory left gastric artery arising from proper hepatic artery in a male cadaver around 70 yrs. This variant artery further divided into two branches, one supplied the cardio- eosophageal junction, and the other supplied the fundus of the stomach.

**Conclusion:** Detailed knowledge of such variations is a necessity for intra arterial infusion of chemotherapeutic agents. Preoperative evaluation of the arterial pattern and variations can minimize complications during and after surgery. Hence the incidence, anatomy of this variant branch will be presented.

4. **A STUDY OF OPENINGS OF HEPATIC VEINS INTO THE RETRO- HEPATIC SEGMENT OF INFERIOR VENA CAVA IN INDIAN POPULATION.**

**Dr. Veena Vidya Shankar1, Dr Roopa Kulkarni2,**
Associate Professor1, Senior Professor2, Department of Anatomy, M.S.Ramaiah Medical College, Bangalore.

**Introduction:** The liver is supplied by hepatic artery and portal vein. The knowledge of the hepatic veins opening into the retro hepatic part of IVC will help in understanding the causes for bleeding in injuries of liver, pathology of Budd – Chiari syndrome, spread of tumors and surgical
excision in case of tumor resection. Therefore this study has been planned to note the length, the axis and the number of hepatic tributaries into the upper and lower parts of retro hepatic IVC.

**Aim:**
1. To provide morphologic & morphometric data of retro hepatic segment of inferior vena cava and hepatic veins openings into it.
2. To study the size and number of openings of hepatic veins into retro hepatic segment of inferior vena cava

**Material and methods:** The study on the retrohepatic segment of inferior vena cava was conducted on 40 Indian cadaveric livers. The age of the cadavers ranged between 50 to 80 years and the livers used were free from major gross pathological changes. The orientation of RHIVC (retrohepatic segment of inferior vena cava) was recorded. The length of RHIVC was measured. The posterior wall of RHIVC was opened by a midline vertical incision. The number, size and nature of openings of hepatic veins were determined. The observations & results of this study will be discussed during the presentation.

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5. **BILATERAL ACCESSORY HEADS OF BICEPS BRACHII WITH ITS CLINICAL IMPORTANCE - A CASE REPORT**

*Dr Snigdha Das¹, Dr Anupama K², Dr Shailaja Shetty³*

*Post graduate student¹, Assistant Professor², Professor & Head³*

*Department of Anatomy, M S Ramaiah Medical College, Bangalore.*

**Introduction:** Biceps brachii is an elongated double headed muscle of anterior compartment of arm. It is one of the common variant muscle of human body, in terms of number & morphology of head. Third head of biceps is most common variant; but four, five or even seven heads have also been reported. These supernumerary heads produce strong flexion & supination and may also cause neuro-vascular entrapment syndrome.

**Observation:** During routine dissection of upper limb for 1st year MBBS students in the Department of Anatomy at M S Ramaiah Medical College, in a 60 year-old female cadaver, bilateral accessory heads of biceps were found; one to be arising from middle of antero-medial surface of humerus proximal to insertion of coracobrachialis & another head from medial intramuscular septum. At first, both the accessory heads joined with each other entraping median nerve & brachial artery, successively with biceps tendon for insertion. The findings were noted and photographed. The details will be presented.
Conclusion: Knowledge of accessory heads of biceps brachii has a significant role for the practitioners attending patients of neuro-vascular compression syndrome in upper limb as well as for the surgeons, radiologists & traumatologist to avoid iatrogenic injuries.

Key Words: Accessory head, biceps brachii, neuro-vascular compression syndrome

6. CLASSIFICATION OF PLANTAR ARTERIAL ARCH BASED ON ITS FORMATION

Dr Anupama K, Dr Saraswathi G, Dr N M Shama Sundar, Dr C M Nanjaiah
Assistant Professor, Professor, Professor and Head
M.S.Ramiah Medical College Bangalore

Introduction: In the present day scenario the advances in the field of plastic, reconstructive and microvascular surgeries of the foot has necessitated a thorough knowledge of variations in the plantar arterial arch. The arterial arch is formed by the union of dorsalis pedis and lateral plantar artery.

Materials and methods: The study was done on 50 feet of the formalin fixed adult human cadavers by dissection in JSS Medical College, Mysore. It was observed that the deep plantar arch was present in all specimens. It was classified into six types based on the contribution of dorsalis pedis and lateral plantar arteries.

Results and conclusion: The incidence of each type of plantar arch is as follows: Type A-10%, Type B- 4%, Type C- 26%, Type D- 36%, Type E- 20%, Type F- 4%. The study was undertaken because of the variation in formation of arch which is of clinical importance in reconstructive surgery, microvascular surgery and auto graft transplantation.

Key words: Plantar arterial arch; Dorsalis pedis artery; Lateral plantar artery; Plastic surgery; Microvascular surgery.

7. CASE - BASED TEACHING METHOD IS AN ALTERNATIVE?

Dr. M. Janardhan Rao, Asst. Prof. Mamata Medical College, Khammam, A.P

Aim: there has been a decline in the amount of time available for anatomy teaching in the medical under graduate curriculum. New methods of anatomy teaching have to be adopted to establish student's confidence in anatomy.

Methods: 50 student volunteers were given weekly anatomy teaching sessions based on clinical case presentations over 4 weeks. The students were given anatomy test to rate confidence in their anatomy knowledge before and after the teaching sessions.
Results: There was a 2 point increasing in students’ self-rated confidence and 10% increase in the average test score after the case based anatomy teaching sessions.

Discussion: case-based anatomy instruction can significantly improve students’ confidence and knowledge of anatomy, a viable option for the teaching of anatomy in the modern medical curriculum.

8. EFFECT OF CELL PHONE RADIATION (900 TO 1900 MHz) ON HIPPOCAMPAL NEURONS OF MICE – A HISTOMORPHOMETRIC STUDY.

N. Mugunthan¹, J. Anbalagan¹, Shanmuga Samy², S. Meenachi³.
¹ Department of Anatomy, ² Department of Pathology, Mahatma Gandhi Medical College and Research Institute, Puducherry. ³ Department of Public Health, Tamilnadu.

The aim of our study was to evaluate the possible effects of chronic exposure to 900-1900 MHz (ultrahigh frequency) radiation emitted from 2G cell phone on hippocampal region of mice at histological level. Our animal study was approved by institutional animal ethics committee. We used 36 litters containing both male and female mice for each control and experimental groups. We exposed the experimental group animals to 2G (900-1900MHz) ultrahigh frequency radiations, 48 minutes per day for a period of 30 to 180 days. Sham control group animals were kept under similar conditions without 2G exposure. We sacrificed the animals; removed the brain and processed for histomorphometric study. We measured the weight and volume of brain, analyzed the sections of hippocampal region under microscope to study the structural changes and morphometric data like neuron density and nuclear volume. We compared the findings of both groups statistically. The hippocampal region of 2G exposed group had the following findings in comparison to sham control group: The pyramidal layer of cornu ammonis – CA1, CA2 and CA3 region showed reduced thickness of cell layer. Shrinkage and dark stained nucleus in the region of CA2 showed pyknosis. The supra pyramidal limb and infra pyramidal limb of dentate gyrus showed reduced granular cell layers and few granular cells showed pyknosis. The present study showed that chronic exposure of ultrahigh frequency radiation emitted from 2G cell phone could cause damage and loss of hippocampal pyramidal neurons of mice brain.

Key words : 2G Cell phone, Radiation, Hippocampus, Pyramidal neuron, Mice.

9. MORPHOLOGICAL STUDY OF PAPILLARY MUSCLE OF LEFT VENTRICLE OF HUMAN HEART.

Talukdar Hrishikesh, Paul Mishmee, Deka Rupsekhar, Talukdar Kunjalal
Department of Anatomy, Gauhati Medical College, Guwahati-32

Objective: To study the morphology of papillary muscle of Left ventricle of human heart. The integrity of the mitral valve depends on the proper functioning of the papillary muscles.
Materials and Methods: 30 formalin fixed human cadaveric heart were collected from Department of Forensic Medicine and Department of Anatomy of Gauhati Medical College after fulfilling all medico legal formalities. These were dissected to expose the papillary muscles.

Results and Observation: Variations in number and shape of papillary muscles were observed in a few cases. Details will be discussed at the time of presentation.

Conclusion: Papillary muscles have great functional importance in cardiac activity. It has been found that abnormal papillary muscle is frequently observed in hypertrophic cardiomyopathy along with sudden cardiac death. So knowledge of the prevalence of variations or abnormalities of the papillary muscle will aid in diagnosis of different cardiac conditions. Left ventricular papillary muscles are vital to both left ventricular and mitral valve function. Papillary muscles are longer and thinner in dilated cardiomyopathy. Left ventricular calcification in elderly occurs at papillary muscles, aortic valve cusps, posterior mitral annulus.

10. EXTRA MUSCLE ON THE DORSUM OF HAND -A CORRELATION WITH EVOLUTION

Dr Indira C K1, Dr Amar Jayanthi A2
1. Assistant Professor of Anatomy, GMC, Thrissur.
2. Associate Professor of Anatomy, GMC, Thrissur.

Introduction: Evolutionary history and the extensive anatomical remodeling of hand provides explanation to the extra muscle found on the dorsum of the hand. Comparative study shows that tools were hand held weapons that were hurled or swung during disputes in various ways. Generation after generation, natural selection enhanced the anatomical basis of prowess of hand. Both proximal and middle phalanges in ancestors were curved towards the palm to withstand stress from gripping limbs during arboreal locomotion. In human hand, fingers have lost their curvature, balance of strength has shifted radially to the thumb, 2nd and 3rd metacarpals.

Materials and methods: Extra muscle in the dorsum of hand was noted during course of dissection of cadaver during undergraduate teaching in the Department of Anatomy, Government Medical College, Thrissur.

Observation: Muscle was found on dorsum of right hand having slender tendinous ends and fusiform muscular belly in the fourth compartment of dorsum of wrist. Origin was from ligaments of wrist joint and insertion to base of second phalanx of middle finger and extensor expansion.

Conclusion: Muscle could be due to persistence of dorsal muscle mass that favour evolution from primates to human or could be due to an unusual migration of myoblast during morphogenesis.
11. MORPHOLOGY OF INFRA ORBITAL FORAMEN IN SOUTH INDIAN REGION.

Vishal Kumar.
Department of Anatomy, K. S. Hegde Medical Academy, Nitte University, Mangalore, Karnataka, INDIA -575018.

Aim: The infra orbital foramen (IOF) situated below infra-orbital margin (IOM) transmits infra-orbital nerve and infra-orbital artery. The knowledge about the shape and direction of the IOF has important implications in various surgical and anaesthetic procedures as a ready reference for morphologists and anatomists.

Materials and Methods: Sixty adult dry skulls of unknown sex were collected from the Department of Anatomy and Forensic Medicine from our institution. IOF on both sides of skulls were assessed for the shape and direction by inspection. Our observations are analyzed and compared with other authors.

Results: The shape of the IOF was vertically oval in majority of the skulls (37.5%) and was semi lunar shaped in 10.83% of the skull. The IOF was directed infero-medially in about 52.5% of the cases and was directed medially in 6.67% of the cases.

Conclusion: The present study confirms that there is racial as well as regional variation in the shape and directions of IOF, thus emphasizing the need to have morphometric data for South Indian population.

12. Comparative histological study of oesophagi of mammals

1Durga Devi.G, 2Jacintha Antony, 3Kalpana Ramachandran
1Assistant Professor of Anatomy, Sri Muthukumaran Medical College and Hospital, Chennai.
2Professor and Head of the Department of Anatomy, Sree Balaji Medical College and Hospital, Chennai.
3Professor & Head Department of Anatomy, Sri Muthukumaran Medical College and Hospital, Chennai.

Background and Aims: Numerous studies have been done on the oesophagus of mammals. Histological structures of different layers of the oesophagus vary widely among species as it depends upon their physiological activities and the type of ingesta they consume. The aim of the present study is to compare the histological features of various layers in the wall of oesophagus in humans with that of other mammals such as goat, cow and dog.

Material and methods: The oesophagi of all the four mammals (six specimens from each mammal) were collected. Human oesophagi were obtained from cadavers from the department of Anatomy of Sree Balaji Medical College and Hospital Chrompet, Chennai. Cow and goat
Oesophagi were obtained from slaughter houses. Dog oesophagi were collected from dogs that died in road traffic accident. Specimens were obtained from the upper and lower ends of oesophagus. All the specimens were fixed in 10% formalin solution for one week. Tissue processing was done using standard methods. Serial sections of 5µm thickness were taken from each specimen and stained using Haematoxylin and Eosin and special stains such as Van Gieson and Masson’s trichrome for collagen fibres.

**Results:** The epithelium showed keratinisation in goat and cow and was absent in human and dog. The submucosal glands were absent in goat, scanty in human and cow and numerous in dog. The muscularis externa comprised of striated muscle fibres in the upper end and smooth muscle fibres in the lower end in human. In dog and cow, skeletal muscle fibres were present throughout the length of the oesophagus.

**Conclusion:** This comparative study of various layers of oesophagus in mammals will be helpful in correlating structure with function and can form basis for understanding any pathological variation in each individual layer. Thus the present study may be useful for clinicians especially in understanding the aetiology of tumours in the oesophagus with respect to food habits and for surgeons for xenografting.

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13. THE APPEARANCE OF OSSIFICATION CENTRES IN STERNUM – A DIMORPHIC STUDY IN NORTH INDIANS

Gurdeep S Kalyan\(^1\) & Gaurav Agnihotri\(^2\)

\(^1\)Professor & Head, Department of Anatomy, Government Medical College, Patiala, Punjab, India.

\(^2\)Associate Professor, Department of Anatomy, Government Medical College, Amritsar, Punjab, India.

The state and pattern of ossification is a reliable guide for the determination of age. The timing of appearance and characteristics of ossification centres of sternum exhibit considerable variation on the basis of individuality, sex and race. The study aims to lay down a standard in North Indians on which we can rely to evaluate the ossification against the backdrop of known chronological age of the fetus. The study was conducted on 100 aborted North Indian fetuses of both sexes (male female ratio 1:1) aged between 3 months to full term. The appearance of centres of ossification was studied and the sterna were typed. There exists a female prevalence in appearance of centres of ossification. The ossification centre for manubrium appears with the
centre for the 1st sternebra. Double centres are frequent and there is a tendency of rise in frequency of double centres from above downwards (for the sternebrae). The incidence of Type I sternebra was maximum amongst the fetuses (50%) followed by Type II (30%) and Type III sternebra (20%). The morphological variation is a fundamental feature for proper maturation and ossification of sternum. The timing of appearance of ossification centres has medicolegal and clinical significance and explains the chronology of development of an individual.

Keywords: Ossification, Variation, Sternum, Typing.

14. OBSERVATIONS ON OSSIFIED PTERYGOSPINOUS LIGAMENT IN SKULLS IN SOUTH & CENTRAL KARNATAKA REGION.

Dr. Nirmala. D, Associate Professor, Department of Anatomy, J. J. M. Medical College, Davangere. Karnataka.

Aims & objectives: Pterygospinous ligament is the fibrous ligament extending from the posterior border of the lateral pterygoid plate, to the spine of the sphenoid bone. This ligament is ossified sometimes forming a foramen of Civinini. This ossified ligament bears clinical significance when it is involving the mandibular nerve and chordatympani nerves which are related closely. Earlier studies report occurrence of ossified ligament ranging from 1.6 % to 8 %. This study was done to know the percentage of ossified ligament in Karnataka region.

Materials & methods: The study was done on 200 skulls in the department of Anatomy of medical and dental colleges in Mysore & J. J. M. Medical College, Davangere.

Observations: Out of the 200 dried human skulls studied the pterygospinous ligament ossification was found in 9 skulls, i.e 4.5% of total skulls. Out of the 9 skulls, pterygospinous ligament ossification was found bilaterally in 2 skulls, i.e, 1 %, unilaterally on right side only in 2 skulls, i.e, 1 % & on left side only in 5 skulls,i.e, 2.5%.

Conclusion: The literature survey reveals less on the ossified pterygospinous ligament, which implies rarity of this variation. The ossified pterygospinous ligament may interfere with the treatment to trigeminal neuralgia, and also may compress the mandibular nerve and its branches in their course leading to symptoms. Hence the knowledge of this anatomical entity is essential for clinicians and is discussed in detail.

Keywords: Pterygospinous ligament, mandibular nerve, ossification.

15. A STUDY OF RHOMBOID FOSSA AND MID SHAFT CIRCUMFERENCE OF THE CLAVICLE

Shivarama CH, Shivarama Bhat, Muhammad Asif, Yenepoya Medical College, Deralakatte, Mangalore-575018, Karnataka, India.
**Aim:** This study was done on samples of human clavicles to determine the sexual dimorphism which is of anthropological, forensic and clinical importance.

**Objective:** To determine the sexual dimorphism in human clavicle of people belonging to North Karnataka part of South India.

**Materials and Methods:** Totally we utilized 246 clavicles for our study. The Clavicles were classified into male and female by its gross osteological features.

**Observations:** The incidence of rhomboid fossa of depressed and elevated types is seen more in males and smooth and flat types are seen mainly in female clavicles. This study also showed relative degree of sexual dimorphism in the mid shaft circumference of male and female clavicles.

**Results and Conclusion:** The present study revealed, depressed and elevated types of rhomboid fossa are more common in male clavicles and smooth and flat types of rhomboid fossa in female clavicles. This study elucidated significant degree of sexual dimorphism of rhomboid fossa of clavicle and also in mid shaft circumference.

16. MORPHOMETRIC STUDY OF FORAMEN SPINOSUM IN SOUTH INDIAN SKULLS

*Dr. Castor Shylla, **Dr. R. Vijaya, ***Dr. S. Jaleswara Rao
*Postgraduate, **Assistant professor, ***HOD & Professor Dept. of Anatomy
Meenakshi Medical College & Research Institute, Enathur, Kanchipuram, Tamilnadu

**Introduction:**
- Foramen spinosum is a small circular foramen located in the greater wing of sphenoid, posterolateral to foramen ovale.
- It transmits middle meningeal artery, nervous spinosus to the middle cranial fossa and middle meningeal vein
- Posterolateral to the foramen spinosum, lies the spine of sphenoid which is laterally related to auriculotemporal nerve.

**Importance of this study:**
Knowledge of the morphology of the foramen spinosum is important for following reasons:
- The foramen spinosum is an important landmark in skull base injury especially in middle cranial fossa and infratemporal fossa.
• The variations are of clinical significance in fractures of base of skull and in diagnosing any aneurysms or vascular lesions in cranial cavity.
• This knowledge will be useful to neurosurgeons to identify and preserve the neurovascular structures while approaching middle cranial fossa.

Aims & Objectives:
• To find the dimensions of foramen spinosum.
• To identify bony growth and divisions of foramen spinosum.
• To observe the relation of foramen spinosum to spine of sphenoid
• To compare with previous study.

Materials and Methods:
• Study will be done in 50 dried adult human skulls, obtained from department of anatomy Meenakshi medical college & research institute.
• Maximum length, breadth of foramen spinosum and shape, position were noted using simple divider and meter rule.

Results: Presence and absence of foramen spinosum was noted. The shapes – round, oval, irregular were noted. The maximum length and width of foramen spinosum was measured. Any variations from normal was also observed. The relation of foramen spinosum to spine of sphenoid was also observed.

17. OSSIFIED PETROCLINOID LIGAMENT IN SKULLS IN KARNATAKA REGION.

*Dr. Nirmala. D, Associate Professor, Department of Anatomy, J. J. M. Medical College, Davangere, Karnataka.*

Aims & objectives: The tip of the apex of the petrous temporal bone is connected with the petrosal process of the dorsum sellae of the sphenoid by the petro-clinoid ligament. Abducent nerve, after piercing the dura mater, passes below this ligament along with the inferior petrosal sinus, through the fibro-osseous canal formed by the apex of petrous temporal bone and the petroclinoidal ligament. Less frequently this ligament is ossified in few skulls, converting the fibro-osseous canal into complete osseous canal. The study was done to identify its presence in Karnataka region, and its clinical implications are discussed.

Materials & methods: The study was done on 200 skulls in the department of Anatomy of medical and dental colleges in Mysore & J. J. M. Medical College, Davangere.

Observations: Out of the 200 dried human skulls studied the petroclinoid ligament ossification was found in 2 skulls, i.e 1% of total skulls.
Conclusion: The ossification of petroclinoid ligament is a rare variation which is found in 1% of skulls. The awareness of this variation is necessary for neurosurgeons, otologists and other clinicians treating neurological involvement especially of abducent nerve.

Keywords: Petrosphenoidal ligament, ossification, abducent nerve, inferior petrosal sinus.

18. TECHNIQUES FOR DEMONSTRATION AND CHARACTERISTICS OF THE PREDESCEMET’S LAYER OF HUMAN CADAVERIC CORNEA

Dr Umesan K.G, Assistant Professor, Department of Anatomy, Govt Medical College, Thiruvananthapuram, Dr ShobhaRamnarayan, Professor & HOD, Govt Medical College, Thiruvananthapuram

The PreDescemet’s layer was identified by Dr HS Dua during deep corneal surgery and is named after the discoverer. It is a homogenous layer with distinct immunohistochemical characteristics located anterior to the Descemet’s membrane. The presentation includes the anterior and posterior approaches to demonstrate the Dua’s layer with videos and photographs.

19. A COMPARATIVE STUDY OF APPEARANCE OF OSSIFICATION CENTRES OF LOWER END OF RADIUS, LOWER END OF ULNA, CARPALS, METACARPALS & PHALANGES IN NORMAL AND DIFFERENT GRADES OF PROTEIN ENERGY MALNUTRITION (PEM) CHILDREN.

Dr.A.Gnanavel, Assistant Professor of Anatomy, Meenakshi Medical College & Research Institute, Enathur, Kanchipuram.

Introduction: The Indian population differs widely from the western population in hereditary, dietary, socio economic status & ethnic factors. In the Indian population also significant difference exists between North Indian & South Indian population in the above aspects.

Aim:
- To study the appearance of ossification centres of lower end of radius, lower end of ulna, carpals, metacarpals and phalanges in normal and children with different grades of PEM
- To compare the results with the previous studies.

Materials: 125 normal subjects and 125 PEM children attending thepaediatric OPD & ward in Meenakshi Medical College and Research Institute, Enathur, Kanchipuram.
The subjects were grouped based on age as: 6m-1yr, 1.1-2yrs, 2.1-3yrs, 4.1-5yrs, 5.1-6yrs.

**Methods:** X-ray wrist and hand AP view

**Results:** The ossification centres appeared early in normal male and female children in our study when compared to other studies and there is no difference in appearance of O.C in Grades I & II PEM and significant difference exists in Grades III & IV PEM.

**Conclusion:** The recorded studies done in India are few and this study helps to standardize bone age in normal and PEM children in South Indian population.

**Key words:** Ossification centres (O.C), protein energy malnutrition (PEM)

### 20. UNCORRECTED TETROLOGY OF FALLOT SURVIVING IN HIS FOURTH DECADE: A CASE REPORT

*Arnab Ghosh  Bijon ch Dutta  Sudipto Pal*

*Department of Anatomy, Silchar Medical College, Silchar*

**Introduction:** Tetralogy of Fallot is one of the most common forms of cyanotic congenital heart disease and in the absence of surgical correction it has an elevated early mortality, with most patients dying in childhood. The mortality rate being 30% at 2 years of age, 50% by the age of 6 years and fewer than 3% of all patients of uncorrected TOF reach beyond 40 years.

**Aim:** The authors report this case because of the unusual course of an uncorrected tetralogy of Fallot. There are only a few reports of patients with an uncorrected tetralogy of Fallot who reach an advanced age.

**Materials & Method:** The patient, 40 years of age presented with complaints of headache, chest pain, respiratory difficulty, generalised weakness and bluish discolouration of tongue and peripheral extremities. Patient was examined clinically and diagnostic investigations were done.

**Observation and Result:** General examination revealed cyanosis with grade 4 digital clubbing and ejection systolic murmur in left lower parasternal area. Echocardiography suggested large misaligned ventricular septal defect (VSD), gross aortic override, hypertrophied septal wall along with right ventricular hypertrophy, hypoplastic pulmonary artery and left ventricular hypertrophy as well. MRI revealed an overriding aorta, large VSD, right ventricular hypertrophy with a hypoplastic main pulmonary artery.

**Conclusion:** Factors responsible for longevity of patient can be a hypoplastic pulmonary artery with slow development of subpulmonary obstruction and left ventricular hypertrophy, delaying shunting from right to left ventricle. The patient was suggested phlebotomy as a symptomatic treatment. Cardiac interventions were not done and he was referred to a higher centre.
21. AN ADVANCED STUDY PROTOCOL FOR TEACHING CARDIAC ANATOMY IN THE FIRST YEAR BPT.

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Department of Anatomy.
1, 2 PSG Institute of Medical Science and Research, Coimbatore.
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Aim: The aim of this study is to take the multi disciplinary approach of teaching cardiac anatomy and narrow down it into an effective, time specific and as an advanced study protocol.

Objective: The objective is that the student first gets inspired towards cardiac anatomy, acquires the basic cardiac anatomical knowledge and builds the clinical anatomy knowledge on it for his/her future career, by a time specific study protocol.

Materials and Methods: For teaching cardiac anatomy, three routine modules in our department and seven revised new modules have been taken and implemented in a time specific manner for 50 students in the first year physiotherapy course. The improvement in cardiac anatomical knowledge is assessed by the pre and post test performance, the modules nature and time limit are assessed by the feedback and finally the study protocol for teaching cardiac anatomy is framed in our department. Each module will be discussed in the conference.

Observations and Results: The pass percentage, the average mark out for the whole batch and the interest towards cardiac anatomy has considerably increased. In the feedback about the module, students and faculties strongly recommend us to carry out all the ten modules. The values, feedback and the study protocol will be discussed in conference.

Conclusion: The advanced study protocol is recommended for implementation by the head of Anatomy department. The study will be tried in Medical and other Para medical fields. Lastly we are emphasizing a study protocol for every organ and system in future.

22. CLINICAL IMPORTANCE OF SUPERIOR RADIO ULNAR JOINT

Dr. Soorya Sridhar, Dr. Neelee Jayasree., Dr. L. Hema., Dr. K. Prathiba., Mr. Devi Shankar., Dr. R. Siva Chidambaram.
Narayana Medical College, Nellore

The long bones of the forearm- Radius and Ulna, though are parallel, their ends are reciprocally different, both transversely & antero-posteriorly. The speciality of both the bones are that one bone receives 75% of the body weight (in 4 footed animals) (i.e) Ulna and the other (i.e) Radius partially receives weight to stabilize the weight on the wrist
The Superior Radio-Ulna Joint is prone to numerous conditions as observed in the Out-Patient department of our hospital (Narayana Medical College, Nellore). This prompted us to study the joint in detail with an attempt to explain anatomical reasons if any. Bones of the Fore arm were randomly collected from the Department of Anatomy & Department of Forensic Medicine of Narayana Medical College, Nellore. The Upper ends especially the articular surfaces participating in the Superior Radio-Ulnar Joint were considered for a Preliminary Morphometric study. Variations of the Radial Notch of the Ulna and the Head of the Radius was found along with communications with the Humero-Ulna joint. A detailed report of the study was analyzed for a brief conclusion. We could correlate a few of the conditions of the Elbow joint with our observation on the bones.

23. INTER-TUBERCULAR SULCUS OF HUMERUS & ITS IMPORTANCE CLINICALLY

Dr. R. Siva Chidambaram, Dr. Neelee Jayasree, Dr. L.Hema, Dr. K. Prathiba, Mr. Devi Shanka, Dr. Soorya Sridhar. Department of Anatomy, Narayana Medical College, Nellore.

Humerus is a long bone present in the upper arm and it participates in two different types of Synovial Joint’s namely: a.) Superiorly-Shoulder joint, which is Ball & Socket type of joint, b.) Inferiorly-Elbow Joint, which is a Hinge type of Joint. Biceps Brachii muscle-a.) takes Origin as a tough tendon from the SupraGlenoid Tubercle of the Scapula, b.) Courses Antero-Superiorly through the joint extra synovially, c.) Lodges in the Inter-Tubercular Sulcus, for nearly 2cm. This Long head of the Biceps Brachii, which gradually becomes muscular and receives Short head from the tip of Coracoïd Process of the Scapula. The muscle is inserted by a strong tendon into the Posterior surface of the Radial Tuberosity and as a Bicipetal Aponeurosis. It is a Supinator of the Forearm. We observed 102 randomly collected bones (48 Right & 54 Left) from the State of Andhra Pradesh. A detailed Morphometric Parameters were recorded and analyzed for an Oral Presentation.

Our Aim was to explain and co-relate the possible reasons for different conditions of the Shoulder Joint, where the Muscle - Biceps Brachii was involved. We found Variations in the Inter Tubercular Sulcus and we attempted to co-relate few conditions for better treatment methods for speedy recovery and Rehabilitation.

24. LANGER’S AXILLARY ARCH – A CASE REPORT

Dr. K. Aruna, Dr. N. Nithyapriya, Prof. Dr. T. Sivakami
Department of Anatomy, Thanjavur Medical College, Thanjavur.
Aim & Objective: To report the case of anomalous axillary arch muscle and discuss its clinical significance.

Observation: During routine dissection of an 88 year old male cadaver, an anomalous muscular arch was found unilaterally on the left axilla. The muscular slip extended from latissimus dorsi to the pectoralis major muscle deep to its insertion. It arches medially over the axillary artery, axillary vein and cords of brachial plexus.

Conclusion: Anomalous axillary arch can cause significant clinical problem for surgeons during axillary surgeries and may be one of the differential diagnoses for axillary mass or hyperabduction syndrome.

ABSTRACTS OF POSTER PRESENTATIONS

24.5.14

25. Morphology and Morphometry of External aperture of the carotid canal in South Indian Population

SOMESH M.S., Associate Professor, Srinivas Institute of Medical Sciences & Research Centre (SIMS&RC), Mangalore, India
SHAKUNTALA PAI, Professor & HOD, Srinivas Institute of Medical Sciences & Research Centre (SIMS&RC), Mangalore, India

Aim: To study the morphology and morphometry of aperturaexternacanaliscarotici (AECC) of the human skull in South Indian population.

Methods: 82 dry adult human skulls of unknown sex and of South Indian origin were obtained and variations in appearance of AECC were observed. The length and width of the AECC of both sides were determined using vernier calipers and area (A) was calculated and analyzed. Also measurements were made between certain chosen landmarks on both the sides and analyzed.

Observations & Results: The values for the right side were 8.12 ± 0.99 mm, 6.31 ± 0.64 mm and 40.61 ± 7.79 mm² and for the left side the values were 8.15 ± 1.00 mm, 6.19 ± 0.80 mm and 40.032 ± 8.10 mm² respectively, for the mean length, width and area of the AECC. Also, the shape of AECC was typically round in most of the skulls studied (51.83%).

Conclusion: By analyzing the length, width and area of AECC on both the sides, there was no statistical difference and the values were comparable with the studies done in the past.

26. ACCESSORY PAROTID GLAND - A CASE REPORT

Dr. J. Gayathri, Dr. S.Kalaiyarasi, Dr. S. Sumathi. Prof. Dr. T. Sivakami
Department of Anatomy, Thanjavur Medical College, Thanjavur.
Aim and objective: To report a case of Accessory parotid gland and to discuss its clinical significance. The Accessory parotid gland is salivary tissue separated from the main gland. It is usually located on the anterior part of the main gland and above the main parotid duct and has a secondary duct emptying into the main duct. Incidence is 20%.

Materials and methods: During routine dissection in the Department of Anatomy at Thanjavur Medical college, an accessory parotid gland was found above the main parotid duct on the left side in an 82 years old male cadaver.

Observations: Accessory parotid gland of size 4x3cm was situated above the left main parotid duct and below the zygomatic arch. Two separate ducts from the accessory gland were seen opening into the main duct. Histological section of the gland, showed the architecture of salivary tissue.

Conclusion: The knowledge of the presence of accessory parotid gland is important for the diagnosis and management of tumours arising from them and to differentiate it from lymph node enlargement.

27. HONEY COMB LESION IN NASOPHARYNGEAL ROOF

*Dr. Umesan K.G.* Assistant Professor, Dept of Anatomy Govt Medical College, Trivandrum,  
*Prof ShobhaRamnarayan, Professor*, Dept of Anatomy, Govt Medical College, Trivandrum,  
*Dr Bindu R Menon Associate Professor*, Dept of Radiodiagnosis, Govt Medical College, Trivandrum,  
*ReshmaPai Govt Medical College, Trivandrum*

Case Report: During sagittal section for routine dissection of nasopharynx of an adult male cadaver, a median swelling was observed at the rear end of the roof at its junction with the posterior wall. The 1.7X 1.5 cm irregular surfaced firm lesion was covered by mucosa of nasopharynx and appeared multilocular. Section revealed uniform septation inside the lobulated mass with empty honeycomb like appearance. It was located beneath mucosa anterior to longus coli. The nasopharyngeal roof was intact. There was no evidence of local pressure effects or invasion by the lesion. There was no hypervascularity associated with the mass.

Impression: Thornwaldt’s cyst

Discussion: Thornwaldt’s cyst develops from notocordial remnants in epipharynx. Generally asymptomatic and incidentally noticed, the cyst may be single or multiloculated. Classified as crusting or cystic, the lesion may contain proteinaceous to infected material inside a wall of
respiratory epithelium. Symptoms include occipital headache, halitosis, Eustachian block and nasal block. Treatment is transnasal or transoralretrovelar marsupialisation/ excision. A Thornwaldt’s cyst will be presented with photograph of the lesion.

28. BILATERAL HIGH DIVISION OF SCIATIC NERVE: A CASE REPORT

Arnab Ghosh, Sudipto Pal  
Department of Anatomy, Silchar Medical College, Silchar

Aim: To report a rare case of bilateral high division of sciatic nerve.

Introduction: The Sciatic nerve (L4-S3) is the largest branch of the sacral plexus and it is also the thickest nerve of the body. It leaves the pelvis via the greater sciatic foramen, descends along the back of thigh and divides into tibial & common fibular nerves in the lower thigh above popliteal fossa. Variations in this arrangement have been reported. We noted one such variation in our study which will be elaborately described during presentation.

Material & methods: During routine cadaveric dissection in the Dept. of Anatomy, Silchar Medical College, Silchar, we came across a case of bilateral high division of sciatic nerve where division occurred within the pelvis in both sides.

Results & Discussion: High division of sciatic nerve is an uncommon phenomenon as only in 12% of people, the nerves separate as they leave the pelvis and is associated with piriformis syndrome, sciatica and injury during intragluteal injections. Other clinical implications will be discussed during the time of presentation.

29. APERT’S SYNDROME: A CASE REPORT

Barman A., Dutta B C., Sarkar J.  
Department of Anatomy  
Silchar Medical College, Silchar, Assam.

Introduction: Apert’s syndrome was first described by Eugene Apert in 1906. He described a triad of craniosynostosis, syndactyly and maxillary hypoplasia. The incidence of Apert’s syndrome is approximately one in 50,000 births.

Material & method: A 3 year old boy was brought with a history of facial deformity along with hand and feet deformities in the Pediatrics OPD. Relevant history was taken; clinical examination and radiological studies were done.

Observations and Result: The boy was first in birth order and his mother's age was 33. There was no family history of similar deformity. On examination, he had symmetric syndactyly of the hands and feet. He also had craniosynostosis with deformed skull. This patient also exhibited midface hypoplasia, exophthalmia, ocular hypertelorism and high arch palate. Crowding of the teeth, malocclusion with anterior open bite were also found. The X-ray of the
hands and feet showed skeletal fusion of phalanges (complex syndactyly).

**Conclusion:** The case represents a rare condition where there is a mutation in the FGFR2 gene causing Apert's syndrome and alters the protein causing prolonged signalling, which can promote premature fusion of bones in the skull, hands and feet.

**30. ABSENCE OF BOTH FISSURES IN RIGHT LUNG - A CADAVERIC CASE REPORT**

*Dr. S. Supadevi, Dr. Rameshkumar Subramanian*

*Department of Anatomy*

*Sri Ramachandra Medical College and Research Institute, Porur.*

**Introduction:**

The right lung classically has one oblique fissure and a horizontal fissure dividing the lung into three lobes namely upper, middle and lower lobes. The oblique fissure runs downwards and medially thereby meeting the inferior border at a distance of about 7.5 cms behind the anterior end and the horizontal fissure passes from the oblique fissure to the anterior border at the level of mid axillary line.

**Case report:**

Many cadaveric studies reported about the variation in the lung fissure pattern, occurrence of accessory fissure, but the incidence of absence of both fissures in the right lung was very less. In the present case absence of both fissures in right lung was incidentally observed during routine dissection of thorax. There was complete absence of both horizontal and oblique fissure in the right lung with a complete oblique fissure in the left lung. There was no accessory fissure observed in the right lung.

**Conclusion:**

The knowledge of the anatomy of the lung fissure may help in clinical interpretation of lung pathologies, because fissure serves as a reliable landmark on lung. Lung pathologies like pneumonia, carcinoma and tuberculosis are usually confined to the lobes. The mode of treatment for each lung pathology will vary and particularly for lobectomy, segmental resection of lung which is done based on the anatomy of the lobes and fissures. This knowledge will help to reduce the post operative morbidity and mortality.

**31. BILATERAL UNDESCENDED TESTIS-a case report**

*Dr. Monica Diana, Dr. Ramesh Kumar Subramanian*

*Department of Anatomy, Sri Ramachandra Medical College and Research Institute, Porur, Chennai*

A 7yr old boy came to the opd with complaints of undescended testis bilaterally noticed by parents a few months ago.
On further examination we found that the Scrotum was underdeveloped, bilateral non palpable testis, with normal inguinal canal, phallus & ectopic sites

USG findings - B/L testis lying deep to the deep ring

To conclude persistent Mullerian duct syndrome has to be kept in mind in case of bilateral cryptorchid testis & infertility. Persistent Mullerian duct Syndrome (PMDS) is a rare form of male pseudohermaphroditism, characterized by the presence of uterus and fallopian tubes owing to failure of mullerian duct regression in genotypically normal males, caused either by an insufficient amount of mullerian inhibiting factor or due to the insensitivity of the target organ to the factor. The diagnosis of PMDS is often established during operative treatment of associated abnormalities such as inguinal hernia and undescended testis, when a uterus and/or fallopian tube is found along with undescended testis in a genotypically and phenotypically normal male.

32. STUDY OF INCIDENCE OF THE SUPRACONDYLAR PROCESS OF THE HUMERUS AMONG SOUTH INDIANS.

Shantharam, V, Associate Professor
Akash Institute of Medical Sciences and Research Centre, Bangalore

Objective: To study the incidence of the supracondylar process of the humerus in South Indians and discuss its clinical implications

Materials and Methods: Hundred dried humeri were studied from department of Anatomy, Akash Institute of Medical Sciences & Research Centre, Bangalore. The bones were examined in detail for presence of supracondylar process. On finding, the dimensions were recorded and the specimen was photographed.

Observation & Results: Out of 100 dried humeri examined, only 1 left-sided humerus showed a osseous spine (supracondylar spur) projecting from the anteromedial surface. It was 5.2 cm proximal to the medial epicondyle, was projecting 0.4 cm from the surface and the base was 1 cm long vertically and 0.8 cm broad. The spine was directed forwards and medially. The distance between the tip of the spine to medial supracondylar ridge was 0.9 cm. The distance of spine from nutrient foramen was 4.2 cm. The total length of this humerus was 31.5 cm. The incidence calculated in this study was 1%.

Conclusion: The supracondylar process is clinically misjudged as a pathological condition of the bone rather than as a normal anatomical variation. This process has been of more interest for anatomists and anthropologists because of its possible link to the origins and relations of the human races. If present it is usually asymptomatic, but may cause symptoms of median nerve compression and claudication of the brachial artery. Treatment is by decompression i.e. releasing the ligament of sruthers attached to the spur.

33. UNILATERAL INCOMPLETE BIFID URETER: A CASE REPORT.
Abstract: Ureter is a long tubular structure extending from renal pelvis to urinary bladder. It develops from the ureteric bud, as a diverticulum from the mesonephric duct. We have observed a right sided incomplete bifid ureter during dissection done for undergraduates in our institution. This can be due to early splitting of ureteral bud. The incidence of bifid ureter is 0.5 – 3.0%. This kind of congenital anomalies either remain asymptomatic or may cause complications like pyelonephritis or urinary lithiasis. So information regarding this kind of variation is very useful for clinician or surgeon for successful treatment.

34. Patterns of netsurfing among Medical Students in Govt Medical College, Thiruvananthapuram

_Dr Umesan K.G. Assistant Professor of Anatomy, Govt Medical College, Thiruvananthapuram_  
_Guide: Dr Shobha Ramnarayan, Professor & Head, Department of Anatomy, Govt Medical College, Thiruvananthapuram_

Introduction  
With increased academic demand medical students are to depend on Internet for quick & updated information. Along with academic search, sending & receiving e-mails, searching for non-curricular information, chatting, browsing, entertainment and many other amenities are utilized while surfing. A very low fraction of the users tend to stay away from the original purpose and get drifted into the unwelcome trends resulting in poor performance in studies and aberrational behavior. Internet addiction is characterized by excessive or poorly controlled preoccupations, urges or behaviours regarding computer use and internet access that lead to impairment or distress. Onset is reported to occur in the 20s age group. Internet addiction has been associated with dimensionally measured depression and indicators of social isolation. Psychiatric co-morbidity is common, particularly mood, anxiety, impulse control and substance use disorders. Many of the medical students who performed very high in the medical entrance examination are seen to stay back in studies in the medical college. There may be many contributory factors like the stress induced by change of place of stay and learning, diet change, academic load and psycho-social stress factors related to the environment in the institution. The present study is an attempt to go through the internet surfing habits of the MBBS students of Govt Medical College Thiruvananthapuram and to get an idea about the prevalence of internet addiction syndrome among them.

I would like to explore the pattern of internet usage and understand the gains and losses to the users among the medical students of Govt Medical College, Thiruvananthapuram

Objectives
To study the net surfing behavior among the medical students of Govt Medical College, Thiruvananthapuram using a questionnaire

To detect the prevalence of Internet addiction Disorder among the medical students of Govt Medical College, Thiruvananthapuram using a questionnaire

**Setting**
The study is intended to be done among students willing to take part, in Govt Medical College, Thiruvananthapuram. The duration is 1 year

**Type of study**
Cross sectional study

**Sample size**: 200

**Materials and Methods:**
A questionnaire seeking the details of internet habits of students and standard questions regarding the identification of internet addiction syndrome, prepared by the investigator was distributed to the students expressing their willingness to take part in the study. In the first part of the questionnaire, they were assessed by their grading the response from 0 to 3 for each question. In the second part, they could choose the answer from the four alternatives given.

**Data Analysis**
The data was analysed by the SPSS program.

**Observations**
146 students out of the 200 approached responded to the questionnaire. 90.0% students reported to engage regularly in Internet-surfing. Rate of Internet-surfing of boys is higher than that of girls ($X^2=3.27$, $P<0.05$). Time was apparently spent more on activities like sharing and listening to music, watching films, chatting online, and playing games than for academic purpose. 12% felt that the studies get affected. A pattern similar or close to being called as internet addiction disorder was reported by 5.5% male students and 1% of female students.

**Conclusion**
Internet addiction syndrome exists among Medical students in spite of the reduced facilities & time available. Obviously it leads to academic underperformance. Awareness needs to be created along this aspect among teachers and students.

**35. MORPHO-HISTOLOGICAL STUDY OF MYOCARDIAL BRIDGES**

*Dr. S. D. Nalina Kumari, Dr. T. S. Gugapriya, Dr. E. Kamala, Dr. N. Vinay Kumar*

*Department of Anatomy, Chennai Medical College Hospital and Research Centre, Trichy.*

**Introduction:**
A Band overlying the intramural segment of coronary artery—a place where the artery goes through myocardium instead of epicardium is called myocardial bridging (MB). A wide variation of 0.5%–90.4% occurs in the incidence of MB by the cadaveric and angiographic study. More over the occurrence of atherosclerosis in coronary artery segments under myocardial bridges still remains controversial.

**Aim:**
To study morpho-histologically the myocardial bridges for confirming their association to atherosclerosis using cadaveric hearts.

**Methods:**

Thirty cadaveric hearts from department of Anatomy were examined. After removing epicardial fat, course of the coronary arteries were delineated and observed for the presence of MB. In the hearts that exhibited MB, the location, length of MB, its distance from the coronary ostium was measured. Sections were made proximal to MB, under MB and distal to MB in the arteries. The perimeter of the arteries was measured. The sections were processed for histological study of intimal –media thickness ratio.

**Result:**

Twenty four hearts showed MB over the left anterior interventricular artery. One showed MB in right coronary artery. Multiple MB in single artery was seen rarely. The length of the MB segment was around 4 cm on an average. Mostly the MB is seen in the mid to distal part of the artery. The intima was found to be thinned out in the section of the vessel underneath the MB.

**Conclusion:**

This study concludes that Left coronary artery is the commonest to have myocardial bridges. But the occurrence of this MB in the distal part of the vessel in contrast to previous studies is an important finding to be noted. The presence of intimal thinning underlying the myocardial bridges questions the previous studies that claimed MB’s protection of vessels from atherosclerosis.

36. A COMPUTERIZED TOMOGRAPHIC STUDY OF HEIGHT OF ETHIMOIDAL SKULL BASE

*Dr.N.Vinay kumar, Dr.T.S.Gugapriya,Dr.E.Kamala,Dr.S.D.Nalinakumari - Department of Anatomy, Chennai Medical College Hospital And Research Centre, Trichy*

**Introduction:**

During endoscopic sinus surgeries, the most important anatomical structures that need preoperative visualization and evaluation are the lateral lamella and ethimoidal skull base. Ethimoidal skull base (ESB) extends from the superior attachment of lateral lamella of cribriform plate to the junction of the lamina papyracea.

**Aim:**

To study, measure and classify EBS using 1mm slice Coronal sinus CT images.

**Methods:**

Sixty Coronal sinus CT scan images at the level of visualization of anterior ethmoidal artery canal were taken for studying the EBS on both sides. A horizontal line bisecting the orbit was taken as the base line reference for inferior extent. The height of the EBS was measured .Then it was classified into High, Moderate and low EBS by taking 7mm as upper limit and 4mm as lower limit of height of EBS. Mean height of EBs in the study group was also computed and side to side variation in same individual were also noted and statistically analyzed. The height of the EBs and Gender association were also studied.
Results:
EBS varied between 3mm-13mm with an average of 9mm. Side to side variations was also seen to exist. Gender and height were correlated statistically.

Conclusion:
Preoperative recognition of low EBS and alerting the surgeon of the potential for iatrogenic injury by measure the height of EBS needs to become a standard practice.

37. THE ROLE OF Q- ANGLE IN THE DIAGNOSIS OF PATELLO FEMORAL PAIN SYNDROME
Umapathy Sembian, Muhil.M, Nandha Kumar, Dept of Anatomy, Chennai Medical College Hospital& Research Centre (SRM), Trichy.

INTRODUCTION:
One of the most common disorder of knee is patella femoral pain syndrome (PFPS) which constitutes about 25% of all knee injuries treated in the orthopedic department. PFPS is considered to be a challenging problem to the clinicians as multiple factors contribute to its etiology like abnormal lower limb mechanics, muscle weakness, soft tissue tightness and even over exercise.
Among the above mentioned test an increased Q- angle with subsequent abnormal lateral tracking of patella is considered to be one of the main causes of PFPS.

AIMS AND OBJECTIVES:
- To find out the Q-angle in healthy age and sex related population.
- To find out the Q-angle in patients with knee pain.
- To ascertain whether a person with increased or decreased Q-angle may develop PFPS in future.

MATERIALS AND METHODS:
The subjects were patients with knee pain attending our college ortho OPD the age of the patients were from 25-75 yrs and a total of 120 participants( males-60, females-60). The control group consists of a total 60 normal healthy individuals, without any previous history of knee pain, trauma or any knee surgeries or neurological deficits.

METHODS:
A set of six tests were conducted to confirm the diagnosis of PFPS and then Q- angle was measured to all the subjects and control group.

OBSERVATION: in our study we found a strong co relation between the PFPS and an increase in the Q-angle.

CONCLUSION: Q-angle in females was more than males probably due to wider pelvis.
- Q-angle in patients with PFPS were more than normal subjects.

38. A STUDY OF MORPHOLOGY OF AIR CELLS IN THE MIDDLE TURBINATE AND ITS ASSOCIATION WITH SINUSITIS AND DEVIATED NASAL SEPTUM
**Introduction:**
The middle concha is attached to the ethmoidal labyrinth of the lateral nasal wall. Santorinus first described the air cells of middle turbinates called concha bullosa (CB) or middle turbinate pneumatisation or bullous middle turbinate that is commonly found as an anatomical variation usually associated with deviated nasal septum (DNS) and sinus disease. The positive CT findings for concha bullosa have varied from 14 – 53%. But the correlation of the pathology of the paranasal sinuses and concha bullosa are still controversial.

**Aim:**
To identify the prevalence of the lamellar and bulbous variety of the concha bullosa and also to correlate its association with sinusitis and deviated nasal septum.

**Method:**
A cross sectional observational Computed tomography coronal axis study was done in 100 patients who had complaints of chronic sinusitis and headache. The patients were classified into mild, moderate and severe with respect to their sinusitis and deviated septum. The extent and type of pneumatization of the middle turbinate was found out and classified. The associations were statistically correlated.

**Result:**
The concha bullosa found was 23% lamellar, 3% bulbous and 16% extensive variety. DNS and sinusitis were also found to be significantly associated in 26%. Concha bullosa, DNS and sinusitis were significantly associated in 19%. Similarly, the association of concha bullosa and DNS was seen in 16%. On the other hand, our study showed that concha bullosa and sinusitis were not related considerably as it was seen only in 3%.

**Conclusion:**
The study suggests that the otolaryngologists should be aware of the prevalence of lamellar variety of concha bullosa and be familiar with the co-existence of concha bullosa, DNS and sinusitis for proper interpretation and diagnosis.

39. **Superresolution optical fluctuation imaging (SOFI)**

*Dr Umesan K.G, Assistant Professor Dept of Anatomy Govt Medical College Thiruvananthapuram*

All electromagnetic waves are prone to diffraction and so there is a fundamental limit regarding the smallest structure that can be resolved with light. This diffraction barrier has been described by Ernst Abbe in 1873. Diffraction limit was an obstacle in imaging very small proteins of cells and similar nanostructures during fluorescent microscopy. Superresolution microscopy is an optical imaging technique by using the principles of light microscopy. It has been helpful in dealing with the limits for fluorescence microscopy. Improvements in this technique have made it possible to image cellular structures and dynamics of fixed and even live cells and organisms.
at resolutions of several nanometers. This has a profound effect in the visualisation of cell structure and interactions to a clearer level.

**Principle:**
Super-resolution techniques allow the capture of images with a higher resolution than the diffraction limit. They may be
- True super-resolution techniques, which capture information contained in evanescent waves
- Functional super-resolution techniques, involving advanced experimental techniques overcoming the known limitations to reconstruct a super-resolution image

**Functional technique may be**
- Deterministic super-resolution: Fluorophores show a nonlinear response to excitation, and this can be exploited to enhance resolution. These methods include STED, GSD, RESOLFT and SSIM.
- Stochastic super-resolution: Due to the chemical complexity, several close-by fluorophores emit light at separate times and thereby become resolvable in time. These methods include SOFI and STORM

**Combination of techniques:**
LIMON / Light Microscopical nanosizing microscopy
Multicolour imaging can be used for differentiating the dynamic interaction and compartmentalization of biomolecules.

In this presentation, I would like to show the benefits of SOFI over conventional fluoroscopy using pictorial demonstration of the tubulin network of fibroblasts immune-stained with infrared emitting quantum dots.

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40. A STUDY OF LATERAL LAMELLA OF CRIBRIFORM PLATE

*Dr. T. S. Gugapriya, Dr. N. Vinay Kumar, Dr. E. Kamala, Dr. S. D. Nalinakumari*

*Department of Anatomy, Chennai Medical College Hospital and Research Center, Trichy.*

**Introduction:**
The orbital plate of the frontal bone forms the roof of the ethmoidal labyrinth that serves to separate the ethmoid air cells from the anterior cranial fossa. The thinnest anatomic structure in the skull base—Lateral lamella of the cribriform plate articulates with the orbital plate and it is a common site of injury in the skull base. Kero classified the position of the cribriform plate relative to the ethmoidal roof.

**Aim:**
To study the configuration of lateral plate of cribriform plate using coronal CT scans.

**Methods:**
Lateral lamella of 60 archived Coronal CT scans were studied on both sides. The coronal section at the level of visualization of infra-orbital foreman was taken as the standard section for doing the measurements. Medial ethmoidal roof point (MERP), lateral ethmoidal roof point (LERP) and cribriform point (CP) were used to measure the length and to deduce the configuration of lateral lamella of cribriform plate.
Result:
Asymmetry in the configuration of ethmoidal roof was seen between both sides in almost all CT examined. Kero’s Type II and Type I were commonly seen which gave the length of lateral lamella to be between 1-7 mm that points towards increased chance of accidental injury with the increase in height of lateral lamella.

Conclusion:
The preoperative knowledge about the asymmetry, length and configuration of lateral lamella of cribriform plate is vital during endo nasal ethmoidal surgeries, so as to avoid iatrogenic injury to the ethmoidal roof.

41. MORPHOMETRIC ANALYSIS OF MENTAL AND MANDIBULAR FORAMEN

Dr Diana Laishram* Dr Deepti Shastri**

Department of Anatomy, VMKVMC, Salem

Aim: Analysis of morphometry of mental and mandibular foramen using computer assisted image tool.

Objectives:
1. To observe the variations in the shape and size of mental foramen.
2. To observe the variations in position of mental and mandibular foramen.

Materials and methods:
65 dry mandibles from the Department of Anatomy, VMKVMC, Salem were taken.
Digital camera
Computer
Image tool software

Results & observations:
Shape of mental foramen- Oval shaped- Right-16.9%, left-11.7%, Round shaped- Right-24.7%, left-29.9%
Size of mental foramen-MFB= mean horizontal diameter(Mental foramen breadth), MFL= mean vertical diameter(Mental foramen length)
Right-
MFB-0.45%, MFL-0.35%
Left-
MFB-0.47%, MFL-0.38%
Position of mental foramen- D1= mean of distance between mental foramen and alveolar margin, D2= mean of distance between mental foramen and lower border of mandible
Right- D1-2.09%, D2-1.89%
Left- D1-2.16%, D2-1.91%
Position of mandibular foramen-D1-distance from the lowest point of the mandibular foramen to the centre of mandibular notch, D2- distance from the lowest point of the mandibular foramen to
the anterior border of mandibular ramus,D3- distance from the lowest point of the mandibular foramen to the posterior border of mandibular ramus,D4- distance from the lowest point of the mandibular foramen to the gonion point
Left -D1-3.80%,D2-2.77%,D3-2.40%,D4-3.23%
Right -D1-4.10%,D2-2.79%,D3-2.62%,D4-3.15%

**Conclusion:**

Detailed knowledge of the morphometry of the mental foramen is essential in clinical dentistry when administering regional anesthesia and performing peripheral surgery in the mental region of the mandible. Mandibular foramen is an important landmark for procedures like inferior alveolar nerve block, implant treatment and mandibular osteotomies.

**42. A STUDY ON THE VARIATION OF COELIAC TRUNK - HEPATIC ARTERIAL SYSTEM**

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*Mr. A. PERUMAL, Lecturer, Department Of Anatomy,*  
*Dr. DEEPTI SHASTRI, Professor & Head, Department Of Anatomy.*  
*Vinayaka Missions Kirupananda Variyar Medical College, Salem.*

**Aim & Objective:** To examine the anatomical variations that occur in the Coeliac trunk-Hepatic arterial system.

**Materials & Methods:** 50 cadavers were dissected to examine the variation in the Coeliac trunk – Hepatic arterial system

**Observation:** A Case of Right Hepatic Artery arising independently from the aorta was found in a cadaver.

**Results:** In this study, Out of 50 cadavers, ONE (2%) cadaver was found to have a variation in the Coeliac trunk- Hepatic arterial system.

**Conclusion:** Anatomical variations of the Coeliac trunk- Hepatic arterial system are not infrequent. And they have a considerable importance in Liver transplants, Laproscopic surgery, Radiological abdominal interventions and Penetrating injuries to the abdomen.

**43. FRATERNAL TWINS WITH SINGLE PLACENTA-A CASE REPORT**

*Dr.Laigy Paul, Dr.T.Sathvika, Dr.Deepti Shastri.*  
*Department of Anatomy,Vinayaka Missions Kirupananda Variyar Medical college, Salem, Tamilnadu.*

Twins can either be monozygotic and develop from one zygote that splits and forms two embryos, or dizygotic and develop from two separate eggs that are fertilized by two separate sperms. Usually identical twins — which come from a single, split embryo — can share a placenta. This report describes twins with shared palcenta with intrauterine death delivered from a 35yr old pre-eclamptic woman. The twins were a female fetus of about 20 weeks and a male
fetus of about 16 weeks with a single placenta. No gross anomalies were seen in the fetuses. It was a single placenta with two amniotic membranes. Skeletal survey of the fetuses was normal but that of placenta showed calcification. The case is presented for its uniqueness.

44. COMPLETE DUPLICATION OF THE RIGHT GREAT SAPHENOUS VEIN AND SEGMENTAL DUPLICATION OF LEFT GREAT SAPHENOUS VEIN.

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Abnormalities of the lower limb veins lead to various venous disorders which could be obstructive or associated with venous insufficiency. Common ones being the varicose veins, Deep vein thrombosis and ulcers, of which varicose veins has a higher incidence of 15% and 25% in male and female categories of both Western and Indian population. Since many variations are noted in veins in comparison to arteries, a better understanding of venous system would help in better evaluation of venous disorders for better prognosis.

During routine dissection of a 65yr old male cadaver, a complete duplication of the Great Saphenous Vein (GSV) was noted from the medial end of the dorsal venous arch till its opening into the saphenofemoral junction in the right lower limb and a segmental duplication at the level of knee joint till 3 inches below the saphenofemoral junction was noted in left lower limb after which it continued as a single GSV. The perforators opened into the medial division of the duplicated veins. Such a variation could thus explain the recurrence of GSV incompetence.

Thus understanding of GSV would leads to greater improvement in post-operative prognosis and such variations can also be used as vascular grafts in cases of ischemia and arterial blocks. The knowledge of such variations is important to surgeons, orthopedicians and interventional radiologists who operate in this region.

45. MULTIPLE VARIATIONS IN THE VEINS OF HEAD AND NECK- A CASE REPORT

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The complexity in the development of veins of the head and neck makes the anatomical variations in the venous drainage pattern of head and neck very frequent. Recent developments and refinements of microsurgery have revolutionized the head and neck reconstruction.

Variations encountered in the recipient vessels and commonly used flaps add to the complexity of surgery. Knowledge of such variations is mandatory to avoid complications during various surgical procedures for surgeon and also for the radiologists while evaluating radiographs.
Superficial veins are used for venous cannulations in debilitated patients, and also as venous manometer and for vena-graft harvesting in endarterectomy. During routine dissection of head and neck of an adult male cadaver aged 65 years, variations in the formation and drainage of veins of head and neck were observed. In our report, on the right side of the neck, Common Facial vein was formed by the union of anterior division of retro-mandibular vein with the facial vein. The vein instead of opening in to Internal Jugular vein traversed superficial to the Sternocleidomastoid and joined the external jugular vein in the supra-clavicular triangle forming a common trunk which opened in to Subclavian Vein. The superior thyroid vein instead of opening directly in to IJV, joined the lingual vein and together formed a common trunk that drained into internal jugular vein. Middle thyroid vein & inferior thyroid vein were normal in its course and drainage. On the contra-lateral side, no such variations were found.

46. MULTIPLE VARIATIONS IN THE VISCERA & VESSELS OF THE ABDOMEN—A CASE REPORT

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In routine dissection of a 60 yr old male cadaver at Anatomy Department, several visceral and vascular variations were observed. The greater omentum was pushed upwards and extends upto umbilicus only. The epiploic foramen was closed with fibrous adhesions. The greater omentum was attached to the visceral surface of the spleen above the colic impression. The appendix was very short, occupied splenic position. The mucous membrane of caecum and descending colon showed irregular outgrowths.

An accessory hepatic artery arose from common hepatic artery which supplied the left lobe of liver gave a branch to head of pancreas. A branch from the proper hepatic artery also supplied a group of matted lymph nodes in right vertebral gutter at L1 vertebral level. The origin of superior mesentric artery was normal and gave postero-inferior pancreatico-duodenal artery. The left gastric vein joined with superior pancreatic vein and opened into splenic vein. The portal vein received inferior mesentric vein at the junction between splenic vein with superior mesentric vein. A mass of right and left para aortic group of lymph nodes of the dimensions was seen matted and enlarged. There was another lump of matted lymph nodes below the left renal vein in the midline & vein from these matted lymph nodes drained into left renal vein. The above variations are presented for its surgical significance.

Key words: Accessory hepatic artery, hepatic artery variations, inferior mesenteric vein variations

47. RECURRENT MISCARRIAGE – A CASE REPORT
We report a case of recurrent miscarriage. A 32 year old patient with history of 10 weeks of pregnancy came to OP with chief complaints of profuse bleeding per vagina for past 1 day and diagnosed to have spontaneous abortion. She had past history of 3 recurrent miscarriages between 8 weeks and 12 weeks of gestation. And the present is fourth miscarriage by 10th week of gestational age. The aborted sample tissue was sent to human genetics laboratory for the diagnosis of any underlying genetic cause for the recurrent miscarriage. The sample was subjected to karyotyping and FQ-PCR (fluorescent quantitative-polymerase chain reaction) to search the mutation in gene known to cause miscarriage and to obtain new information on genetic causes of recurrent miscarriage. The result obtained was chromosomal aneuploidy. Recurrent miscarriage is defined as 3 or more consecutive pregnancy failures/unintentional expulsion of embryo/foetus before 24th week of gestation and is estimated to affect approximately 1% of couples trying to conceive. The known causes of recurrent miscarriage include chromosomal abnormalities, metabolic abnormalities, uterine anomalies and immunological factors. This case focuses on genetic and molecular abnormalities that may contribute to the recurrent miscarriage and delineates strategies for genetic evaluation and clinical management in subsequent pregnancies.

48. SYNOSTOSIS AROUND SHOULDER JOINT

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Aim : The aim of the present case report was carried out during the course of study of rotator cuff injuries.

Objectives :
- To study the pattern of rotator cuff injuries.
- To study the architecture of joints as well as ligaments in and around shoulder joint.

Materials and Methods :
It is an intercolaboration study between anatomy and radiology from SRMC& RI using x-rays of shoulder joints reported under rotator cuff injuries.

Observations :
During the course, we came across an interesting radiological finding showing the features of synostosis in and around the acromioclavicular joint as well as shows the calcification of ligaments around this area.

Results : The present case report shows the synostosis around shoulder joint.

Conclusion : The knowledge thus obtained is of immense value for arthroscopic surgeons as well as radiologists.

Keywords: synostosis, acromioclavicular join
49. ABSENCE OF INTERNAL CAROTID ARTERY IN BRAIN AMONG SOUTHINDIAN POPULATION – A CADAVERIC STUDY

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Aim: 1. To observe the incidence of absent internal carotid artery in brain. 2. To observe associated brain abnormality, the corpus callosum agenesis. Literature evidences say, the incidence of absent internal carotid by radiological methods in Western population is 0.01%.

Materials and Methods: Over a period of 6 years 218 formalin fixed brain specimens were studied by naked eye examination at various medical colleges in and around Puducherry. Whole brains with intact blood vessels were included in this study. Base of the brain was observed for the presence or absence of internal carotid artery. Corpus callosum was also examined.

Observations: Among 218 whole brains, absent internal carotid was found in 2 brain specimens. Corpus callosum was intact in all the brain specimens.

Results: The incidence in south Indian population as per this study is 0.92%.

Conclusion: It is evident that the incidence of absent internal carotid artery among South Indian population is more, compared to Western population. Considering the other associated conditions like aneurysm of vessels, cardiac anomalies, cerebrovascular accidents neurofibromatosis and corpus callosum agenesis, it is mandatory to scan the vital organs like heart, brain, kidney in case of absent internal carotid artery.

Key words: absent internal carotid – South Indian population – associated anomalies

50. INNOVATIVE INTERACTIVE CLINICAL ANATOMY LECTURES (INICALs) FOR FIRST YEAR MEDICAL STUDENTS

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Aim & Objectives: Traditional lecture based anatomy teaching tends to focus on anatomy in its own right, rather than relating it to clinical problems; so a format was hypothesized which encourages students to relate anatomy to patient presentations, which might help them in discerning clinical relevance.
Our objective was to make the students competent in applying & correlating the anatomical knowledge gained through dissection of abdomen towards understanding various Clinical Conditions in Abdomen.

**Materials & Methods:** Nine clinical conditions in abdomen teaching were selected for InICALs. First year medical students (n=150) were divided into 2 groups, *Group1–Study group (SG, n=75)* & *Group2–Control Group (CG, n=75)*. SG received nine InICALs along-with traditional gross anatomy lectures (TGL) and dissection. CG received only TGL along with dissection. A post-test in Clinical anatomy was conducted for both groups. SG students’ response on TGL & InICALs on their learning and understanding of the clinical conditions were collected systematically using the Nominal Group Technique (NGT).

**Results:**
The mean post test scores of the SG were 22.5+/- 8.3 and the same for the control group was 9.2+/- 6.7. The difference between the mean post test scores of the two groups was 13.3 which was statistically significant (p<0.001). SG NGT response scores demonstrated that there was contrasting differences between the two methods of teaching and students widely preferred InICALs compared to TGL.

**Conclusion:**
InICALs are effective in enabling students to correlate anatomical and clinical information, as well as being acceptable as a better method of teaching and learning.

**51. HEMI-SACRALISATION OF FIFTH LUMBAR VERTEBRAE-CASE REPORT.**

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Lumbosacral transitional vertebrae (LSTV) are common congenital anomalies of the lumbosacral spine. Most frequently, the fifth lumbar vertebra shows signs of assimilation to the sacrum, a condition often referred to as sacralisation and in case of lumbarisation, the first sacral vertebra shows signs of transition to a lumbar configuration. Complete transition results in numerical abnormalities of the lumbar and sacral segments. Although the condition has an incidence of over 12% in the general population, knowledge about the exact clinical implications is still lacking. During the routine Osteology classes for first MBBS students in ESIC Medical College & PGIMSR, K. K. Nagar, Chennai we observed a bone showing sacralisation of the fifth lumbar vertebrae with a partial cleft in between the bodies of 5th lumbar and 1st sacral vertebrae. Due to the association between lumbosacral vertebral anomalies with low back pain, early disc degeneration in the young individuals and other spinal pathology the present case is being reported. Failure to recognize such vertebral anomalies during spinal surgery may have serious consequences.

**Keywords:** Lumbosacral spine; Transitional anomalies; Sacralisation.
52. HEMI-LUMBARISATION OF FIRST SACRAL VERTEBRAE-CASE REPORT.

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The lumbosacral spine not only protects the spinal cord and spinal nerves but also supports and transmits weight of the body to the inferior extremity and thus plays an important role in posture. Lumbosacral transitional vertebrae (LSTV) are congenital anomalies of the lumbosacral region, which includes sacralisation of fifth lumbar vertebra and lumbarisation of first sacral vertebra. During Osteology class for first MBBS, we noticed lumbarisation of first sacral vertebra in the Department of Anatomy, ESIC Medical College & PGIMSR, K. K. Nagar, Chennai. We observed the skeleton with partial lumbarisation of first sacral vertebrae on the left side while it appeared partly fused on the other side. Lumbosacral transitional vertebrae are due to its embryological origin. These variations may affect normal function because of compression of nerves, soft tissue and ligamentous strain between joints. Knowledge of such variation is important to diagnose lower back pain, sciatica, disc prolapse and is helpful in procedures like spinal anesthesia and lumbar puncture.

Keywords: Lumbosacral spine; Lumbosacral transitional vertebrae; lumbarisation, spinal

53. DELAYED PRESENTATION OF CONGENITAL DIAPHRAGMATIC ANOMALIES- A REVIEW OF 3 CASES

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Dr. S. S. Rajasekar- Professor and Head of Department, Department of Anatomy, SMVMCH, Pondicherry-605107
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This series of case reports presents a review of three cases of congenital diaphragmatic anomalies. Two cases are that of congenital diaphragmatic hernia, one, a patient brought to the hospital at 11 months of age with complaints of cough and grunting for one month. Another case aged 44 years presented with complaints of severe abdominal pain and vomiting for 1 day. The third case was a patient diagnosed with diaphragmatic eventration at the age of 26 years who presented with complaints of breathlessness on exertion and a dragging type of pain on the left side of the chest for a period of 1 month. All three cases were admitted and treated in Sri Manakula Vinayagar Medical College and Hospital, Madagadipet, Pondicherry.

An effort will be made to compare and give an explanation for the presentation and timing of the three cases in the report.
54. A CADAVERIC STUDY OF VARIOUS ANOMALIES IN EXTRAHEPATIC BILIARY APPARATUS

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*Postgraduate, **Assistant Professor, *** HOD of Anatomy, R.M.M. College & Hospital, Annamalai University, Chidambaram.

Aim: To determine the frequency of variations in the morphological characters of the extrahepatic biliary system.

Materials and methods: The materials for this study were obtained from formalin fixed 50 adult cadavers from the Department of Anatomy, Rajah Muthiah Medical College, Chidambaram. The various anomalies of the extrahepatic biliary apparatus were photographed and studied.

Observations and Results: We observed in this study various type of anomalies related to gallbladder, hepatic duct, cystic duct. Further results will be discussed during the presentation.

Conclusion: This study might be useful for the surgeons during laparoscopic cholecystectomy, liver resection and living donor transplantation as surgeries carried out in ignorance of such anomalies can result in major complications such as leakage of ducts or atrophy of liver.

55. ANOMALOUS ORIGIN OF LEFT VERTEBRAL ARTERY AND ITS CLINICAL SIGNIFICANCE – A CASE REPORT

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A case of anomalous origin of left vertebral artery was seen during the routine dissection of a 55 year old female cadaver. The left vertebral artery originated from the aortic arch between left common carotid and subclavian artery, while the right arises from the subclavian artery. The literature on the variation of the artery is reviewed and a detailed morphometric study of the artery was carried out. The diameter of prevertebral segment of left vertebral artery was less than that of right vertebral artery with a narrowed segment in the middle. The possible embryologic basis and clinical importance of this variant are also reviewed because of its importance for neurosurgeons and also in performing both diagnostic and interventional angiography.

56. MAYER-ROKITANSKY-KUSTER-HAUSER SYNDROME-A RARE CASE REPORT

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Introduction: The Mayer-Rokitansky-Kuster-Hauser (MRKH) syndrome is characterized by congenital aplasia / hypoplasia of the uterus and the upper part of vagina in women showing normal development of secondary sexual characteristics and a normal 46 XX karyotype. It affects at least 1 out of 4500 women. MRKH is classified as type I when isolated utero-vaginal aplasia exists in patient. Incomplete aplasia and /or association with other malformation is most
frequently referred to as type II MRKH syndrome or MURCS association (Mullerian duct aplasia, Renal dysplasia and Cervical somite anomalies)

**Case Report:** A 17 year old female patient presented to Obstetrics and Gynecology department with primary amenorrhea and lower abdominal pain. On examination breast development shows Tanner III and pubic hair in Tanner II. External genitalia showing normal clitoris, labia majora and minora. Bilateral ears are malformed and low set. MRI reveals two uterine horns with atrophic cervix and vagina with evidence of hematometra and hematosalpinx on left side hydrometra and hydrosalpinx on right side, right cystic ovary and normal left ovary with left renal agenesis and hemivertebra of L5 vertebra. Total abdominal hysterectomy and vaginoplasty was done and was sent for histopathological examination. Microscopic features of the sections submitted were correlated with gross features. We present this case for its rarity.

**Keywords:** MRKH, Mullerian duct aplasia,

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**57. CERVICAL THYMIC CYST: A RARE DIFFERENTIAL DIAGNOSIS OF CYSTIC NECK SWELLING**

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**Introduction:** Cervical thymic cysts are rare lesions of neck and mostly congenital. They represent the embryonal remnants of thymopharyngeal duct along the descent of thymus. They account for 0.3% of all congenital cervical cysts in children (<18yrs) and are extremely rare in adults.

**Case report:** We are reporting two cases, one patient a 2 year old male child who presented with a cystic swelling in the left side of neck, clinically diagnosed as cystic hygroma. Another patient, a 58 year old female with an anterior cystic neck swelling, clinically diagnosed as lymph cyst. After complete surgical removal of the cystic lesion, both the cases were confirmed by histopathology as cervical thymic cyst.

**Discussion:** Most cases are usually benign and asymptomatic but malignant transformation of thymic cyst in adults has also been reported in medical literature. Here we discuss the relevant embryogenesis and pathogenesis of this rare and unforgotten cystic neck swelling.

**Conclusion:** Because of its uncommon occurrence, they are rarely included in the differential diagnosis of cystic neck lesions both in children as well as in adults and hence leading to misdiagnosis.

**Key words:** thymic cyst, thymopharyngeal duct, cystic hygroma
58. PREDICTIVE VALUE OF MICRONUCLEUS COUNT IN CERVICAL SMEARS OF NORMAL, INFECTIVE INFLAMMATORY & INTRAEPITHELIAL NEOPLASIA PATHOLOGY IN PERIMENOPAUSAL WOMEN.

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Aim: To prove Micronucleus evaluation in routine Pap smears is a very useful biomarker in cervical cancer screening.

Objective: A micronucleus is a small additional nucleus formed due to chromosomal loss or fragmentation. It’s a good prognostic indicator for monitoring genetic damage in human population. The objective of this study was to get the predictive value of micronucleus count in Normal, Infective Inflammatory, Intraepithelial Neoplasia cervical smears in perimenopausal women of age group of (40-45) ±2 years utility.

Material and Methods: Three months from JAN 2014 - MARCH 2014 Pap slides of 30 cases consisting of 10 Normal, 10 Trichomonas Infective, 10 Intraepithelial neoplasia cases in Mahatma Gandhi Medical College were studied. Only routine Papanicolaou-stained cervical smears were used. In each smear, the number of micronucleated cells were counted under oil immersion and expressed as a count per 1,000 cells. The micronucleated cell counts in each group were compared by using SPSS software and expressed as Mean ± SD and Median (min-max) for statistical significance.

Observation & Results: The Predictive value of Micronucleus count in Squamous Intraepithelial Lesion smears > Infective Inflammatory smears > Normal smears. Analysis of Variance between the groups done by ANOVA test. The P value is < 0.01, which is significant.

Conclusion: This simple Micronucleus test is a powerful biomarker and can be used as a screening procedure in predicting cervical cancer.

59. Case Report Of Congenital Foetus Anomalies of Polydactyly With Ascites

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Introduction: Congenital anomalies (polydactyly) with ascites is a rare type of disorder can be associated with many syndrome and chromosomal abnormalities.

A case report of primi at 24weeks gestation delivered a congenital anamolies with polydactyly (right hand six fingers) and oligodactyly (left hand four fingers) with ascitis. Structural analysis reveals one umbilical artery and one umbilical vein. cut section shows enlarged liver with
congestion and both kidney are enlarged and cystic. cut section of kidney shows multiple cyst of varying size, not communicating with each other

**Key words:** polydactyly, ascites, kidney cyst

60. **PREDICTION OF CERVICAL SPINAL CANAL STENOSIS BY TORG’S RATIO**

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**AIM:**
To predict the cervical spinal canal stenosis in 100 patients of either sex.

**OBJECTIVES:**
To predict cervical spinal canal stenosis by Torg’s ratio (mid-sagittal diameter of cervical spinal canal / mid-sagittal diameter of vertebral body ratio) of C3 to C7 vertebrae on a plain x-ray, lateral view of cervical spine.

**MATERIALS and METHODS:**
This cross sectional retrospective study was conducted in K.M.C, Mangalore. X-rays of cervical spine (lateral view) of 100 patients (50 males, 50 females) between 20 to 70 years of age, who presented with neck pain (subjects with significant vertebral anomalies were excluded).

Using computer software the mid sagittal diameter of cervical spinal canal in mm (a), the mid sagittal diameter of the body of cervical vertebra in mm (b) of the C3 – C7 vertebrae were determined and the TORG’s ratio was calculated with the formula a/b.

If Torg’s ratio is less than 0.8, we can predict significant cervical spinal canal stenosis

**RESULTS:**
In our study, Torg’s ratio was less than 0.8 in 5% at C3, 3% at C4, 2% at C5, C6 and C7 which signifies cervical spinal canal stenosis.

The mean Torg’s ratio was 0.98 in males and 1.09 in females.

**CONCLUSION:**
- The major advantage of Torg’s ratio is its usefulness as a screening method in predicting cervical spinal canal stenosis, since x-ray is the first line of investigation.
- Further evaluation to confirm cervical spinal canal stenosis can be done by using Magnetic Resonance Imaging studies.
61. A clinical and radiological study of Goldenhar Syndrome

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AIM: To analyse the congenital anomalies of Goldenhar syndrome.

OBJECTIVES:
To study the clinical features in Goldenhar syndrome
To compare with other cases reported in the literature

CASE REPORT: A 4 years old female child came to ENT Out Patient Department at Velammal Medical College, Madurai with the history diminution of hearing in the left ear, facial asymmetry, difficulty in closure of the left eye completely since birth.

ON EXAMINATION: On examination, she had deformity of face on the left side, tilting of head on the left side, inability to completely close the left eye, deformity of pinna of the ear with the external acoustic meatus appearing as only a slit. Her Cardiovascular System, Respiratory System & Central Nervous System were normal. Her vision in both eyes were normal. Her back was normal

DISCUSSION: The signs and symptoms of the present case has been compared & correlated with available literature.

CONCLUSION: Goldenhar syndrome is a syndrome involving the ear, face, heart and back usually involving more than one system; hence such patients should undergo medical checkup & proper advice has to be given to parents of affected children inorder to have a better quality of life. Adequate counselling has to be given to all the members of the affected family to avoid future pregnancies with congenital anomalies.