

**ABSTRACTS OF PAPER PRESENTATIONS DURING THE CONFERENCE OF  
U.P. CHAPTER OF ANATOMICAL SOCIETY OF INDIA 2013 HELD AT  
RAMA MEDICAL COLLEGE & RESEARCH CENTRE MANDHANA, KANPUR (U.P.)**

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**1. Crossed fused renal ectopia, a M.D.C.T. angiographic study:**

**Vinay Sharma, C.S. Ramesh Babu, O.P. Gupta\***

Department of Anatomy, Muzaffarnagar Medical College, Muzaffarnagar, O.P. Gupta Imaging Center, Bachcha Park, Meerut.

Renal fusion anomalies in which both the kidneys are fused together in early embryonic life are rarely encountered. Crossed fused renal ectopia is the second most common fusion anomaly with an incidence of approximately 1:1300 – 1:7500 cases. In this anomaly one kidney crosses over to the opposite side and fuses with the kidney of that side. We present two cases of crossed fused renal ectopia observed during M.D.C.T. angiographic evaluation. We observed this anomaly in a 58 year old male on right side where upper pole of left kidney fuses with lower pole of right kidney which is superiorly placed. The right kidney is supplied by two renal arteries from abdominal aorta (one superior polar). The crossed ectopic left kidney is supplied by a single renal artery from aorta. The left ureter crosses the midline and opens into left side of urinary bladder. The hilum of the right kidney was normally facing whereas the hilum of left kidney was facing anterolaterally. Second in a female, 28 years of age, right kidney was crossing the midline and its upper pole fuses with lower pole of left kidney. The hilum of both kidneys are directed anterolaterally. The left kidney was positioned at lower level than normal. The left kidney is supplied by single renal artery arising from aorta opposite to origin of inferior mesenteric artery and the right kidney by a branch of left common iliac artery. The right ureter is crossing the midline to open into urinary bladder. Embryological and clinical significance of such renal fusion anomalies will be discussed.

**2. Radiological Evaluation of Vertebral canal in cervical region in clinically symptomatic and asymptomatic subjects:**

**Dr. Indra Kumar, Dr. C.S. Ramesh Babu, Dr. Rekha Lalwani, Dr. Sangeeta Aneja**  
Department of Anatomy, Hind Institute of Medical Sciences Safedabad, Barabanki, U.P.

Spinal stenosis is defined as the narrowing of central spinal canal or its lateral recesses. Stenosis of spinal canal becomes important only when it results in interference with the normal functions of the contents of the canal. The present study was aimed to evaluate the clinical relevance of stenosis of spinal canal through the most recent technique, MRI. Two parameters anteroposterior diameter (APD) and transverse diameter (TD) were taken into account to ascertain any deviation from normal. The data were statistically analyzed using unpaired 't' test with Welch correction. Anteroposterior and transverse diameter of vertebral canal were compared between symptomatic and asymptomatic subjects and statistically analyzed. The data were represented as mean + SEM ( Standard Error of Mean) A probability (p) value of less or equal to (<) 0.05 is considered as statistically significant and all diameters were taken in millimeter. The present study clearly shows that in both

symptomatic and asymptomatic subjects maximum UP-ASICON 2013APD was seen at C2C3 level. There was a gradual decrease in the APD from C2C3 level to C5C6 level in symptomatic subjects. In asymptomatic subjects maximum transverse diameter was seen at C4 C5 level which also exhibited minimum APD. The increase in TD seen in a mid-cervical level is probably to accommodate the cervical enlargement of the spinal cord.

### **3. Macrodystrophia Lipomatosa: Radiologic Anatomical Correlation: A case Report**

**Hasan S\*** and Maheshwari TP\*

Assistant Professor, Department of Anatomy, SKHM Govt. Medical College, Nalhar Mewat, Haryana

Demonstrator, Department of Anatomy, SHKM Govt. Medical College, Nalhar, Mewat Haryana

**Abstract :** Macrodystrophia lipomatosa (MDI) is a rare cause of congenital macrodactyly characterized by progressive proliferation of mesenchymal elements, with disproportionate increase in fibro-adipose tissue. It occurs most frequently in lower limbs. MDI presents as localized gigantism of the hand or foot and comes to clinical attention for cosmetic reasons mechanical problems secondary to degenerative joint disease or development of neurovascular compression. Here we report an interesting case of Macrodystrophia Lipomatosa in a child and its anatomical correlation. **Material and Methods :** A patient of Macrodystrophia Lipomatosa was thoroughly examined for cutaneous and systemic manifestations and subjected to clinical examination and radiological investigations.

**Result and Conclusion:** Besides clinical examination, radiological imaging and histopathology, thorough knowledge of anatomy assist in reaching the diagnosis. **Key words :** Local gigantism, macrodystrophia lipomatosa, macrodactyly.

### **4. Pattern of Coronary Artery Codominance: Anatomical and Radiological Evaluation**

**Dr. Gunjan Rai\***, Dr. GL Shah\*, Dr. Amit Dwivedi\*, Dr. Om Shankar\*, Dr. SK Pandey\*, Dr. Vivek Parasar\* and Dr. Royana Singh\*

Department of Anatomy\*, Department of Radiology, Department of Forensic and Department of Cardiology, Institute of Medical Sciences, Banaras Hindu University, VARANASI 221005, Uttar Pradesh

**Abstract:** The aim of the study was to find out the prevalence of coronary artery Co-dominance pattern (origin of posterior inter-ventricular branches from both the coronary arteries) in autopsied and embalmed heart and on CT Angiography. Sixteen embalmed human heart were obtained from department of Anatomy, IMS BHU and 20 fresh hearts were taken from Department of Forensic Medicine, IMS, BHU, Eighteen CT angiographies are collected from department of Radiology, IMS, BHU. On anatomical evaluation of embalmed and fresh hearts ( kept in formalin for 1 week) by installing the eosin stain in the arteries total two cases of coronary artery co-dominance pattern was found. On evaluation of C.T. angiography one case of coronary artery codominance was found. Therefore, 7% of cases in the eastern U.P. population exhibited coronary artery codominance. The knowledge of

prevalence in a population coronary artery co-dominance pattern is important for therapeutic and diagnostic purpose. Individuals with such a pattern are least affected by coronary disease.

### **5. CT Study of Sphenoethmoid cell and its clinical importance**

**Choudhary S\***, Siddiqui, M.S\*, Pasricha N\*, Dhawan R\*, Sehgal G\*, Tewari V\*.  
\*Era's Lucknow Medical College, Lucknow U.P. India

Abstract: Objective : To find out prevalence of sphenoethmoid cells and to discuss its clinical importance. Material and Methods: A retrospective analysis was performed on CT scans of head and neck region of patients visiting Radio-diagnosis Department of Era's Lucknow Medical College between January 2012 and May 2013. Results- Prevalence of sphenoethmoid cells is found to be higher than previously reported in literature. Understanding of sphenoethmoid cell is important to avoid fatal injury to the optic nerve and carotid arteries. It is essential to identify the presence of these cells prior to endoscopic sinus surgery in order to avoid complications.

### **6. A prospective study of ultrasonographic measurement of splenic length in Relation with Body surface area in adults of Bihar.**

**Alka Singh\***, J.K. Das\*, Naresh Chandra\*, Hamid Ansari\*  
Department of Anatomy\*, Hind Institute of Medical Sciences, Safedabad Barabanki (U.P.)  
Department of Anatomy\*, Darbhanga Medical College, Darbhanga, Bihar  
Department of Anatomy\*, Kanpur Medical College, Kanpur (U.P.)

Abstract : The spleen, 'Haemo-Lymph organ' composed of lymphoid tissue is the largest 'Ductless gland' in the body. In a variety of Clinical conditions the spleen enlarges. The estimation of splenic size in vivo is often important in the diagnosis, treatment and prognosis of variety of disorders. The precise measurement of spleen by palpation is not reliable. Several prior studies have sought to develop standards for splenic size such as CT. Scan, Scintigraphy, MRI and Sonography. The present study was done to determine the normal range of length of spleen in correlation with the body surface area of adult male and female subjects. 80 male and 80 female subjects aged between 20 -60 years coming to the Dept. of Anatomy and Radiology of Darbhanga Medical College and Hospital, Darbhanga. Bihar were selected Splenic length was determined by Ultrasonography and body surface area was calculated with help of Mosteller formula. It was discovered that length of spleen increased with increase in body surface area in both males and females. The dimension was less in female than that of male with corresponding group of the body surface area. Key Words: Spleen, Ultrasonography, Length, Body Surface area

### **7. Ultrasonographic measurement of placental thickness and its correlation with Gestational Age.**

**Mumal Nagwani\***, P.K. Sharma\*, Urmila Singh\*, Anita Rani\*, Seema Mehrotra\*.

Abstract: Determination of placental size is a part of the overall assessment of intrauterine environment. Placental growth can be estimated by either measuring the thickness or estimating its volume. The purpose of the present study was to determine the normal range of placental thickness and its correlation with gestational age using ultrasonography in our population in third trimester of pregnancy. 100 cases were recruited for the study who came for routine antenatal checkup to Department of Obstetrics and Gynaecology at Queen Mary's Hospital, King George's Medical University, Lucknow. Subjects who had any obstetrical, gynecological, medical and surgical illnesses were excluded. Placental thickness was measured at the level of umbilical cord insertion. Mean thickness of the placenta was  $3.90 \pm 1.1$  cm which increased till 38 weeks of gestation, thereafter decreased. Further details of the results according to gestational groups will be discussed during presentation.

### **8. Ultrasonographic estimation of renal length, width and thickness in healthy young adults of Uttar Pradesh province.**

**Ruchi Jain\***, A.K. Srivastava\*, PK Sharma\*, Punita Manik\*, Jyoti Chopra\*  
\*Department of Anatomy, King George's Medical University, U.P. Lucknow.

Abstract : Unilateral or bilateral change in kidney size occurs in various renal pathologies like congenital anomalies of the kidney, renal cystic diseases, kidney tumours and kidney transplants etc. Despite having a large burden of kidney diseases, there is dearth of information regarding normal data on renal size in the Uttar Pradesh population. However, to our best knowledge, the current nomograms which are widely used locally are derived from studies on Western population that can lead to the false positive or false negative diagnosis of kidney condition. The present study was carried out in Department of Anatomy, King George's Medical University, U.P. Lucknow on 300 ( 207 males and 93 females) healthy young adults,, aged 18 to 30 years of Uttar Pradesh province, to measure renal length, width and thickness. In males, the mean renal length on right side was  $101.3 \pm 5$  mm, width  $50.7 \pm 3.8$  mm and thickness  $36.4 \pm 4.1$  mm, while on left side, mean length was  $103.6 \pm 4.7$ mm, width,  $50.3 \pm 3$  mm and thickness  $37.3 \pm 3.6$  mm. In females, mean renal length on right side was  $97.3 \pm 36.4$  mm, width  $48.6 \pm 4.1$  mm and thickness  $36.0 \pm 3.7$ mm, on the left side mean renal length was  $99.81 \pm 5.8$ , width  $48.8 \pm 3.2$  mm and parenchymal thickness  $36.9 \pm 3$ mm. All the parameters were smaller in Indians, than their Western counterparts.

### **9. Fetal Head circumference – An Ultrasonographic study for fetal gestational age in last 2 trimesters**

**Kamal Bhardwaj\***, Vasundhara Kulshreshtha\*, Sikky Garg\*, Pradeep Singh\*,  
Anshu Gupta\*  
Institution: S.N. Medical College, Agra

Abstract: Fetal Biometry considers measuring several parts of fetal anatomy and their growth. Predictions based upon menstrual history, uterine fundal height and bimanual examination have been in use since a long time but even in the best known cases these techniques have met with errors. Several ultra sound based parameters have been studied time to time to access fetal age and growth. In the present study we have used Fetal Head

Circumference ( HC) as a parameter. During ultrasonography, the fetal HC was measured by positioning the cursors on the outer edges of near and far calvarial walls. The correct plane of section was through 3rd ventricle and thalami in central portion of brain. The cavum septi pellucidum were visible in posterior portion of brain. Present study was carried out in Department of Anatomy of S.N. Medical College, Agra in collaboration with Departments of Radiodiagnosis and Obstetrics and Gynaecology. 50 cases of normal pregnant females attending the Out Patient Department were studied of which 25 cases were of second and third trimesters each and their Head Circumferences (HC) were measured. An average reduction of 5.3% in 2nd trimester and 24% in 3rd trimester was found in HC's of West U.P. region in comparison to Hadlock's normograms comprising of Western Data for fetal Head Circumference. Key Words: Fetal Biometry, Gestational Age, Ultrasonography Head Circumference ( HC)

#### **10. Ultrasonographic estimation of portal vein diameter and its correlation with the height of healthy young adults of Uttar Pradesh province**

**Shikha Singh PK Sharma, Anita Rani, AK Pankaj**  
Department of Anatomy, King George's Medical University, U.P. Lucknow

Abstract: Multiple disorders can affect portal venous system leading to portal venous abnormalities which usually appear as portal hypertension. Precise knowledge of the expected normal portal vein diameter at a given anatomic location is the first step towards developing a quantitative estimate of the severity of the portal vein abnormalities. Present study was carried out in Department of Anatomy, K.G.M.U., Lucknow to establish standardized diameter of portal vein in young adults of Uttar Pradesh province by ultrasonography, 300 healthy cases ( 198 males and 102 females) of age group 18 – 30 years and mean height  $166.18 \pm 7.30$  cm (150 – 183 cm) were included in the study. The portal vein diameter was sonographically measured and correlated with height. The mean diameter of portal vein in the subjects was found to be  $9.495 \pm 1.03$  mm which was in linear correlation with the height. The result obtained in this work is comparable with studies done elsewhere in India as well as in other countries.

#### **11. Variations of Palmaris longus tendon and flexor digitorum superficialis in little finger in medical students at S.N. Medical College, Agra**

**Anshu Gupta,\* Vasundhara Kulshreshta, Sikky Garg\* Kamal Bhardwaj\* Vikas Mahla\***  
S.N. Medical College, , Agra

Abstract: Palmaris longus is one of the five superficial group of muscles of the front of forearm, Palmaris longus is a muscle often used in reconstructive practice surgeries mainly in tendon transfer procedures for replacement of long flexors of the fingers. It has also been used for many other procedures including ptosis correction, lip augmentation and management of facial paralysis. Absence of Palmaris longus in humans appears to be hereditary, but its genetic transmission is not clear. We report here a variant pattern of Palmaris longus, and its probable significance. Any variation in the tendon of the Palmaris longus is gaining importance as it is becoming very popular amongst graft materials for reconstructive surgeries. The present study was undertaken to know the occurrence of

unilateral or bilateral absence of Palmaris longus in Medical students at S.N. Medical College, Agra. The aim of the study was to determine the incidence of absence of Palmaris longus tendon and its association with other neighbouring anomalies like absence of flexor digitorum superficialis (FDS) muscle to little finger etc. We examined 500 MBBS Students ( both male and female) aged 18 to 25 years. Total 74 students had overall absence of PL, out of which 29 presented bilateral absence and 45 presented unilateral absence of PL. In unilateral PL, absence the right side is less (20) than left side (25). So the present study concluded with (1)The unilateral absence is little more common than bilateral absence (ii) There is no association between the PL absence and other neighboring anomalies like absence of FDS in little finger.

**Key words:** Palmaris longus, Flexor digitorum longus (FDS), Tendon transfer.

## **12. Anatomical variations of Circle of Willis- Magnetic Resonance Arteriographic Study**

**Jyoti Chopra\***, Rushna Jalbeen\*, PK Sharma\*, Anita Rani\*, Archana Rani\*

**Abstract:** Cerebrovascular diseases are one of the major causes of death and disability. The knowledge of various patterns of arterial circle of Willis which is responsible for blood supply of brain is important for detection of cerebrovascular diseases and for planning vascular surgeries. The present prospective study was conducted on 50 patients who underwent for Magnetic Resonance Angiography of Circle of Willis. MR images were observed for variation in anterior and posterior part of circle of Willis. Anterior circulation comprises of anterior cerebral artery and anterior communicating artery and posterior of posterior cerebral artery and posterior communicating artery. Typical circle of Willis was observed only 2%. In 30% cases variation of anterior cerebral artery was observed out of which in 14% cases it was unilateral and in 16% cases bilateral. Anterior communicating artery was absent in 30% cases. Posterior cerebral artery showed variation in 14% cases out of which in 12% cases it was unilateral and 2% cases bilateral. Posterior communicating artery was observed to be normal in only 4% cases, in 40% cases it showed unilateral variation and 56% cases bilateral.

## **13. Determination of Bilateral Asymmetry of Tibia in North Indian Adults and its effect on Estimation of Stature**

**Prerna Gupta\***, Pramod Kumar\*, Anamika Gaharwar\*, Hamid Ansari\*

\*Integral Institute of Medical Sciences & Research, Lucknow U.P.

**Abstract:** Height or Stature Status is one of the important parameters of personal identification when only fragmented remains are available identification is difficult by routine methods and only part of body that can help in identification is skeleton. Landmarks on tibia are easily available, hence percutaneous measurement of tibia was taken for stature estimation. **Aim and Objective:** To determine Bilateral asymmetry in the length of right and left tibia in both males and females and see if asymmetry can affect stature. **Material and method:** 300 MBBS students including 150 males and 150 females in the age group of 18 to 24 years were taken from G.S.V.M. Medical College, Kanpur. Tibial length was measured by

marking two points on tibia with spreading vernier caliper. Observations and Result : After statistical analysis it was found that left tibia was 0.06 cm longer than right tibia when both sexes were considered together. When both sexes were considered separately left tibial length was 0.1 cm longer in male and 0.02 cm longer than right tibial length in female. Thus there exists left sided dominance in measurement of tibial length, though it is statistically non significant ( $p > 0.05$ ) and this dominance does not affect stature.

#### **14. Fusion anomaly of typical cervical vertebrae: A rare case**

**Arvind Kumar Pankaj\***, RK Verma\*, RK Diwan\*, Archana Rani\*, Anita Rani\*, Jyoti Chopra\*  
Department of King George's Medical University, U.P. Lucknow.

**Abstract :** An interesting and rare case of fusion anomaly of all typical cervical vertebrae was observed during an ongoing project on anomalies of vertebral column in Department of Anatomy, King George's Medical University, U.P. Lucknow. Superior and inferior articular facet of bodies of all the cervical vertebrae were fused together. Anterior tubercles of lower cervical vertebrae were fused on left side. Body of lower cervical vertebra was facing forward and downward Spinous process of upper cervical vertebrae was short and bifid, while laminae of middle cervical vertebra were not fused suggesting spina bifida deformity. An additional spinous process was observed between middle and lower vertebra but corresponding lamina, transverse process, spinous process body were missing. A bony mass was protruding within the spinal canal from posterior aspect of vertebral bodies, which was reducing the canal diameter at this place Ligamen flavum between vertebrae was partially ossified. Such skeletal abnormalities at cervical region may result in neck pain and neurological symptoms. The anomalies of cervical region are of interest to anatomists, orthopedicians, neurologists, neurosurgeons and even orthodontists. The case will be discussed in the light of available literature along with its clinical and developmental correlations.

#### **15. Morphometric study of Tibial Condylar area in the North Indian Population**

**Ankit Srivastava\***, Dr. Manjula Singh\*, R.J.Thomas\* &Dr.Anjoo Yadav\*.  
Government Medical College, Kannauj

**Abstract:** The upper end of tibia is expanded to form a mass that consists of two parts, lateral and medial condyles which articulate with the corresponding condylar surfaces of the femur. Separating these two condyles is the intercondylar area whose central part is raised to form the intercondylar eminence. This study was undertaken to collect metrical data about the medial and lateral condyles of tibia and it was carried out in the department of anatomy, G.M.C., Kannauj and G.S.V.M. Medical College, Kanpur. The present study was performed on 150 dry tibia of north Indian subjects. Out of which 70 tibia belonged to right side and 80 were of left side. The age and sex of these bones were not known. The anteroposterior length of medial and lateral tibia condylar area was measured along with their transverse diameter. The anteroposterior and transverse length of intercondylar area has also been measured. The data was statistically analyzed to hold comparisons between tibia of right and left side and also between medial and lateral tibial condyles of the same side. The study is important

for anatomists, anthropologists, and orthopedics regarding unicompartmental knee arthroplasty (UKA), complete knee arthroplasty procedures and meniscal transplantation.  
**Key words:** tibia, medial tibial condyle, lateral tibial condyle, intercondylar area.

## **16. Supracapsular Foramen: Cause of Supracapsular Nerve Entrapment**

**Patnaik Poonam**

Jamia Millia Islamia, New Delhi

**Abstract:** Complete ossification of superior transverse scapular ligament leads to formation of bony supracapsular foramen which can result in supracapsular nerve compression. Various authors in different population reported its occurrence to be from 2 – 30%. Present study aims to find prevalence of bony supracapsular foramen in Indian dry scapulae and discuss its applied anatomy. Many etiologies have been associated with SN entrapment, including blunt trauma, rotator cuff tear, instability, compressive lesions such as ganglion cysts, passage of supracapsular artery through the SSN, crutch use, and repetitive traction injury in athletes and variations in SSN morphology, including bony foramen. SN entrapment continues to be an often overlooked cause of shoulder pain and dysfunctional weakness of external rotation and abduction and atrophy of supraspinatus muscle. Mechanical irritation of the supracapsular nerve can occur at this location with excursions of the scapula, particularly during cross body abduction (volleyball players) in variety of activities involving movement of the upper extremity. According to literature, an estimated 0.4% to 2% of superior extremity girdle pain is caused by supracapsular nerve entrapment. In our study occurrence of bony SSF was found to be 8.5%. This anatomical knowledge is important for clinicians and orthopedic surgeons for diagnosis and treatment.

## **17. Incidence of Foramen Vesalius in Adult Human North Indian Crania**

**Neha Gupta\***, Manjula Singh\*, R.J. Thomas\*, Anjoo Yadav\* Kasganj  
U.P.Govt. Medical College, Kannauj (U.P.)

**Abstract:** Foramen Vesalius is a small, variable and an inconstant foramen located in the greater wing of sphenoid, anteromedial to the foramen ovale, in the middle cranial fossa. This foramen is also known as emissary sphenoidal foramen as it transmits a small emissary vein which drains cavernous sinus. The importance of this foramen lies in the fact that an infected thrombus from an extracranial source may reach cavernous sinus. The present study was undertaken to observe the incidence of foramen Vesalius in the adult human crania in north India. For this purpose 200 macerated skulls of unknown age and sex were observed. These skulls were obtained from the departments of Anatomy in Teerthankar Mahaveer Medical College and Research Center (Moradabad), King George Medical College, (Lucknow), Shri Ram Murti Smarak Institute of Medical Science (Bareilly) and Govt. Medical College Kannauj. The foramen Vesalius was found to be present in 68 skulls (i.e. 34%); out of which it was bilaterally in 28 skulls (14%) and unilaterally in 40 skulls (20%) in 16 skulls on right side and in 24 skulls on left side. The knowledge of foramen Vesalius is important for neurosurgeons, anatomists and anthropologists.

**Key words :** Foramen Vesalius, skull sphenoid middle cranial fossa.



## 18. The Morphometric study of the Infra Orbital Foramen in relation to the Inferior Orbital Rim

**Gupta S\***, Thomas RJ\*, Khan A\*, Upadhyay M\*,  
MLB Medical College, Jhansi UP

**Abstract:** The aim of this study was to document the morphological and topographical anatomy of the inferior orbital foramen (IOF) in relation to the inferior orbital rim (IOR), which is necessary in clinical situations that require regional nerve blocks.

**Methods:** A total of 72 dry South Indian adult human skulls of unknown age and gender were studied. In each skull, the IOF on both sides was measured using a metal casing vernier caliper, with the IOR as the reference point. The IOF's location and its transverse and vertical diameters were measured. The shape, size, orientation and accessory foramina of the IOF were also documented.

**Results:** The majority of IOF among the skulls were oval-shaped (76 percent). The majority were directed inferomedially (76.39 percent). The overall mean distance between the IOR and IOF was 8.15 mm. The overall mean vertical diameter was 3.47 mm. The overall mean transverse diameter was 3.34 mm. Accessory foramina of IOF were found in (4.16 per cent) skulls.

**Conclusion:** Knowledge of the anatomical characteristic of IOF locations, diameters, shapes, directions and its accessory foramina may have important implications on blocking the infraorbital nerve for surgical and local anaesthetic planning. Information on the shape of the foramina obtained from this study may provide additional guidance to surgeons when introducing needles in anesthetic procedures.

**Key Words:** Human Skull, Infra Orbital Foramen, Morphometry, Indian

## 19. Infraorbital Foramen location in Dry Human skulls

**Arpita Bajpai\***, Dr. R.J. Thomas\*  
GSVM Medical College, Kanpur.

**Abstract Material and method:** 295 skulls were used (590 sides), located in the Frankfurt Plane through a Craniostat. The measurements were collected by two distinct operators, with a dry tip compass and carried to a caliper. After the skulls were correctly positioned, the distances between the most superior point of the infraorbital foramen (IOF) up to the infraorbital Margin (IOM) were measured, in a manner perpendicular to the Frankfurt Plane. The distances between the centre of the infraorbital foramen (IOF) and the piriform aperture (PA) were also measured in a manner parallel to the Frankfurt plane. The collected data were submitted to statistical analysis by means of the student's 't' test. Observation and Result- The general mean obtained between the IOF and IOM was 6.37 mm (+ - 1.69 mm), with a mean of 6.28 mm (+ - 1.79 mm) on the right side and 6.45 mm (+ - 1.76 mm) on the left side. The general mean obtained between the infraorbital foramen and the piriform aperture was 17.67 mm (+ - mm), being 17.75 mm (+ - 2.10mm) on the right side and 17.60 mm (+ - 2.04 mm) on the left side.

## **20. “Unilateral variation in intrinsic muscle of sole**

**Richa Niranjan\***, Mohd Anas Khan\*, DN Sinha\*, AK Singh\*

Abstract: During dissection of a male cadver, we encounter unilateral variation in intrinsic muscles of sole in layers 1 and 2. The main intrinsic muscle mass of the foot consist of Abductor hallucis, Adductor hallucis, Flexor digitorum brevia, Flexor hallucis brevis and Abductor digiti minimi. These muscles influence the action of other muscle but also modify the effect of contact with the ground. While standing quietly, with feet flat on the ground, intrinsic muscle shows no electrical activity other than sporadic burst at interval of 5 – 10 sec associated with postural adjustment. As heel lifts the concavity of sole is accentuated, intrinsic muscle becomes strongly active. These muscles influence the action of other muscle but also modify the effect of contact with the ground. Thus these muscles helped in acquiring unique feature in human, among rest of species, of bipedalism and plantigrade foot.

## **21. Accessory renal artery – A case report**

**Dr. Anurag\***, Dr. Satyam Khare\*, Dr. Shilpi Jain\*, Dr. Rashmi Ghai\*,  
\*Department of Anatomy, Subharti Medical College, Meerut

Abstract: In the majority of human subject each kidney is supplied by one renal artery arising from the abdominal aorta at the level of L1-L2 intervertebral disc space, below the origin of superior mesenteric artery. Some time there is accessory renal artery present, which usually arise from aorta or iliac artery at any level between T11 and L4 and as prehilal branching. During our routine dissection we found accessory renal artery on right side in one cadaver and on left side in another cadaver. Knowledge of renal vasculature has importance in exploration and treatment of renal trauma, renal transplantation, renovascular hypertension, renal embolization, angioplasty for acquired or congenital lesions and conservative or radical renal surgery. Details of this variation along with its clinical relevance related to embryology will explained in the presentation.

## **22. Agenesis of Thyroid Isthmus**

**Vandana Tiwari\***, Archana Rani\*, Rakesh Kumar Dewan\*, R.K. Verma\*, A.K. Pankaj\*,  
A.K. Srivastava\*, P.K. Sharma\* and Jyoti Chopra\*  
\*Department of Anatomy, K.G. Medical University, U.P. Lucknow

Abstract: The thyroid gland a highly vascular endocrine gland is composed of two lateral lobes connected by a narrow median isthmus thus giving up “H” shaped appearance to the gland. A wide range of morphological vesicles and developmental anomalies of the thyroid gland have been reported in literature such as hypoplasia, ectopic thyroid, hemiagenosis and agenesis. Out of these the incidence of agenesis of the isthemus of thyroid gland is rare and very few cases have been reported. The knowledge of various developmental anomalies of the gland and variation in neurovascular relations will also help the surgeons in better planning of safe and elective surgeries. During routine dissection of 60 years old male cadaver, agenesis of isthemus of thyroid gland in the midline was noted. It resulted in two lateral lobes and the arises supplying the gland were confined only to the respective lobe

with absence of anastomosis. Details will be discussed during paper presentation.

### **23. Bilateral variation of the musculocutaneous nerve : A case report**

**S. Singh\***, S.K. Pandey\*,

\*Department of Anatomy, Institute of Medical Sciences, Banaras Hindu University, Varanasi U.P.

Abstract: During routine dissection of a male (aged 70 – 80 years) in the dissection hall of the Department of Anatomy, IMS, BHU, Varanasi, showed bilateral variations in the branching pattern of the musculocutaneous nerve. Usually the musculocutaneous nerve arises from the lateral cord of brachial plexus. In the present case, there was absence of musculocutaneous nerve. A muscular branch arose from the lateral cord and supplied only the coracobrachialis muscle, whereas a separate branch originated from the lateral root of the median nerve, which ran obliquely and divided into two terminal branches that supplied both the heads of biceps brachii separately. Another branch originated from the lateral root of the median nerve that descended downward along with the median nerve and gave a muscular branch to supply the brachialis and then entered between the brachialis and biceps brachii branch and finally emerged lateral to the terminal part of brachialis as the lateral cutaneous nerve of forearm.

### **24. Arterial pattern of human kidneys- a study by corrosion cast technique**

**Ram Kumar Kaushik\***, Rashmi Ghai\*, Priti Sinha\*, Antima Gupta\*, A.K. Garg\*\*

Department of Anatomy, Saraswati Medical College, Hapur.

Abstract: Knowledge of arterial pattern of kidneys with its variations is essential for diagnostic and surgical procedures of kidneys. Casts prepared by corrosion cast technique are helpful for studying arterial supply of kidneys. They give three dimensional view of arteries. Sixty human kidneys were collected from Anatomy department of Subharti Medical College Meerut and other Medical Colleges. Butyl butyrate crystals were dissolved in acetone kidneys were flushed with water and normal saline to clear any blood clots. 6 – 10 ml of dissolved material is infused in each kidney with pressure by a syringe fitted with wide bore canula. The infused specimens were kept in 10% formalin for three days. Kidneys were then carefully immersed in conc. HCl. It macerated the entire renal tissue without effecting solidified renal arterial casts. Relevant observations were done. Accessory renal arteries were found in 8% specimens. Renal artery divided at hilum in anterior and posterior divisions in 43%. Anterior and posterior divisions found in left renal artery had upward course in 13%. Apical artery arose from posterior division of renal artery in 42% specimens. Upper middle and lower segmental arteries usually arose from anterior division. Posterior segmental arteries arose from posterior division of renal artery. No right renal artery had upward course. Anastomosis between segmental arteries could not be defined.

### **25. Posterior circumflex humeral artery – A branch of subscapular artery – A case report**

**Khanna Soumya\***, Mishra Anand\*,

\*Department of Anatomy, Institute of Medical Sciences, B.H.U. Varanasi.

Abstract: During routine cadaveric dissection of the axillary artery, we came across a novel finding in one of the cadavers where there were only 2 branches of third part of axillary artery. There was no separate posterior circumflex humeral artery but it was arising as one of the branches of subscapular artery. This variation is seen in up to 30% of cases and should be borne in mind by surgeons while doing surgeries on the axilla.

## **26. Variation in the origin of biceps brachii with special thrust on its innervations**

**Sthapak Eti\***, Siddiqui M.S\*., Tiwari V\*, Parisha N\*, Seghal G\*, Nagwani M\*., Srivastava G\*  
\*Department of Anatomy Era's Lucknow Medical College & Hospital.

Abstract: Though human beings are thought to be singularly alike in their general anatomical

construction, but when we come to investigate one particular region in detail, we frequently meet one or another type of variations. Muscles of the arm exhibit numerous variations. Commonest muscle of the arm to show variations is the biceps brachii. We are presenting series of variation on heads of bicep brachii. Material and Method: Nine limbs were dissected as per the standard methods to note the origin, insertion and the nerve supply of the biceps brachii in the Department of Anatomy, Era's Lucknow Medical College & Hospital, India.

Results: Supernumerary head of bicep brachii was seen in three limbs. The origin of accessory head was different in each case though the nerve supply to each head was via musculocutaneous nerve.

Discussion: These supernumerary heads might be significant in producing the strong flexion as well as supination of forearm. They may cause compression of neurovascular structures because of their close relationship to brachial artery and median nerve.

Conclusion: Variant biceps brachii may confuse a surgeon who performs procedures on the arm and may lead to iatrogenic injuries. The surgeons should keep such muscular variations in mind.

## **27. MORPHOMETRIC STUDY OF NUTRIENT FORAMINA OF HUMAN FEMORA AND ITS CLINICAL RELEVANCE**

**Dr. Rakesh Kumar Verma\***, Arvind Kumar Pankaj\*, R.K. Diwan\*, Archana Rani\*, Anita Rani\*,

Navneet Kumar\* and AK Srivastava\*

\*Department of Anatomy, K.G. Medical University, UP, Lucknow.

Abstract: The major blood supply to long bones derived from the nutrient arteries which enter through the nutrient foramina. The nutrient foramina in long bones of limbs are the largest foramina present on the shaft of a bone and admit nutrient arteries for nutrition of the bone. This supply is essential during the growing period, early phases of ossification and in procedures such as bone grafts, tumor resections, traumas, congenital pseudoarthrosis and in transplant techniques in orthopaedics. Knowledge of position, number and variation of nutrient foramina can be used in surgical procedure and medicolegal practices. Therefore, the present study was done to determine the number, size, direction, site and

location of nutrient foramina in human femora in the Department of Anatomy, KG Medical University, UP Lucknow. The majority of nutrient foramina in femur were double in number and medium (1- 2 mm) in size. The location of the nutrient foramina was predominant on middle third of diaphysis and mainly around the linea aspera. The mean foramina index was calculated. The details of observations and results will be discussed during presentation.

## **28. Variation in the origin of first lumbrical muscle in hand**

**Manjula Singh\***,

Government Medical College, Kannauj

**Abstract:** The present study was carried out during dissection in the department of Anatomy, SN Medical College, Agra., M.L.B. Medical College, Jhansi and Government

**Author:** The present study was carried out during dissection in the department of Anatomy S.N. Medical College Agra, M.L.B. Medical College Jhansi and Government Medical College Kannauj. It was observed that first lumbrical muscle had two heads of origin one head of muscle taking origin from flexor digitorum profundus as usual and additional belly it seems arising from the tendon of flexor digitorum superficialis of index finger. Both bellies fuse together forming a common tendon and inserted in dorsal expansion of index finger both the bellies supplied by median nerve. This additional belly has phylogenetic and clinical significance. The presence of additional belly may compress the median nerve is clinically significant and its role in carpal tunnel syndrome will be discussed.

## **29. Teratological Effects of carboplatin, A new potential anticancer agent, in mice**

**Royana Singh\***, Dr. Vivek Parashar\*, Dr. G.T. Shah\*, Dr. Gunjan Rai\*, \*Department of Anatomy, Institute of Medical Sciences, Banaras Hindu University, Varanasi

**Abstract:** Carboplatin (cis-diammine-1.1 cyclobutanedicarboxylateplatinum H) is an antitumor platinum complex derived from cisplatin. Preclinical studies suggest that it may have greater antitumor activity and lower toxicity than cisplatin. The potential of Carboplatin to induce embryotoxicity was investigated in the albino mice. Forty pregnant mice were distributed among treated (n=30) and a control (n=10) group. Carboplatin was administered intraperitoneally to pregnant mice of treated group on day 8th of gestation at dose level of 6 mg/kg. All dams were subjected to caesarean section on Day 19 of gestation. At given dose an increase in the resorption rate and a reduction in the fetal weight and height were found. Gross malformations observed were intraperitoneal hemorrhage, ear canal defect, tail haematoma and limb hemorrhage. Various histological malformations were observed on histological examination of fetal liver, kidney and brain. These included, fatty degeneration, portal vein distortion, degeneration of hepatocytes in liver, sub cortical and juxtaglomerular edema, nephron loss, distortion in normal medullary architecture in kidney ; neuronal loss, sub-cortical edema and distortion of normal architecture in various areas of brain including, cerebral cortex, hippocampus, cerebellum. There were no signs of maternal toxicity. The results show that Carboplatin is embryotoxic at a minimally maternally toxic dose in mice.

### **30. A rare Variation of inferior alveolar nerve and its embryological explanation**

**\*Nikha Bharadwaj, \*Vineeta Tewari**

**Abstract:** The knowledge of the neurovascular relationships of the infratemporal region is relevant in dentistry and surgery. **Aims and objective:** To study the inferior alveolar nerve and maxillary artery in human cadavers through infratemporal dissection. The branches from the posterior division of the mandibular nerve studied and analysed for abnormal course and branches. **Material and method :** 85 human cadavers were dissected and studied.

**Result:** A rare type of bilateral communication between the auriculotemporal and inferior alveolar nerve is described in this study. This communicating nerve is neither related to maxillary artery which is superficial to lateral pterygoid muscle in this case, nor it is related to origin of mylohyoid nerve ( these type of variations are described in most of the previous studies).

**Key words:** inferior alveolar nerve, lingual nerve, maxillary artery, infratemporal fossa, dental surgery.

### **31. Variation in Renal vasculature : embryological Basis**

**\*Shweta Kumari, \*Archana Rani, \*Jyoti Chopra, \*A.K. Srivastava, \*P.K. Sharma,**

**\*Garima Sehgal**

**\*Department of Anatomy, K.G. Medical University, U.P. Lucknow.**

**Abstract:** The renal arteries arise from abdominal aorta below the origin of superior mesenteric artery. On each side, near the hilum of the kidney, each renal artery divides into anterior and posterior branch which in turn divides into number of segmental arteries supplying the different renal segment. During the routine dissection in the Department of Anatomy KGMU, Lucknow, bilateral variation in renal vasculature was observed in 65 year old male cadaver. After its origin from abdominal aorta the right and left renal arteries were dividing into three and two branches respectively. These branches were again divided before entering into renal hilum. An additional artery was also arising from abdominal aorta on right side which was going to the right suprarenal gland and superior pole of right kidney. An additional gonadal artery was also seen on right side. Knowledge of the variations of renal vascular anatomy has importance in exploration and treatment of renal trauma, renal transplantation and various other pathological conditions of kidneys. The details will be discussed during the time of paper presentation.

### **32. Embryological and clinical significance of such renal fusion anomalies will be discussed. A case of Neonatal intestinal Obstruction- Duodenal Atresia : Its embryological and clinical significance – Case Report**

**\*Kaul N.V., \*Singh V**

**\*Department of Anatomy Santosh Medical College, Ghaziabad UP.**

**Abstract :** Duodenal atresia is the commonest type of intestinal atresia (50%) and the most common cause of neonatal intestinal obstruction. The incidence of duodenal atresia is 1:7000 live births. It's a congenital malformation of small bowel in which the duodenal lumen is

obstructed/occluded at a segment. A two days old male new born baby was brought to the causality of BLK Hospital with history of bilious vomiting 8 – 10 episodes. Each vomitus was about 10 – 15 ml. Its started a few hours after first breast feeding. On Examination, the baby was found dehydrated with a pulse rate of 140/m and respiratory rate of 40/m. There was an associated deformity of right upper limb. The abdomen was soft and non-distended on palpation with normal bowel sounds. X-ray abdomen revealed double bubble sign with gasless abdomen. No air fluid level was seen. A provisional diagnosis of proximal small bowel obstruction was made. The patient was resuscitated. An emergency laparotomy revealed presence of duodenal atresia type 1 ( web type) . Duodenoduodenostomy was done and the baby had uneventful recovery. A sample of blood sent for karyotyping study did not show any gross chromosomal defect.

Discussion: The Duodenal atresia is thought to arise from failure to recanalize the duodenal lumen during the 4th and 6th week of gestation. In 25 – 40% of cases, the anomaly is associated with trisomy 21(Down syndrome). Congenital duodenal obstruction may also be associated with other GI and biliary tract abnormalities, or some syndromes (50%) as (VACTERL-) ( vertebral anal, cardiac, tracheal, esophageal, renal and limb). The most common site of obstruction is second part of duodenum distal to ampulla. Sometimes third part of duodenum is also involved.

CONCLUSION: The early diagnosis of congenital duodenal obstruction is still delayed in many patients. Early diagnosis during the antenatal period by USG or in the postnatal period and urgent surgical intervention is the key to management and survival of the infant.

### **33. Thanatophoric Dysplasia Type I (TDI) : A Case Report**

\***Kuldeep Kumar**, \*Chandramadhur Sharma, \*Deepthi Sharma,

\*Department of Pediatrics, Anatomy, Obst & Gynae, RMC & RC, & GSVM Medical College Kanpur

Abstract: Thanatophoric dysplasia (TD) is a severe short limb dwarfism syndrome that is usually lethal in the perinatal period. It is characterized by shortening of the limbs, severely small thorax, large head with a prominent forehead, macrocephaly, curved femur, and flattened vertebral bodies. Thanatophoric dysplasia is divided into 2 clinically defined subtypes: thanatophoric dysplasia type I and type II (TD II or TD2). We report this case because of its rarity with review of literature.

### **34. Poland Syndrome : A case Report**

\*Chandramadhur Sharma, \*Shrawan Kumar, \*Ravi Prakash Agrawal,

\*Manoj Kumar Meghwani

Abstract: Poland syndrome is a rare birth anomaly commonly found in males characterized by partial or complex absence of pectoralis major muscle on one side of the body (mostly right side), along with some other associated anomalies like asymmetry of upper limb. Hypoplastic nipple and syndactyly of the effected side. We hereby report an 8-year old boy with typical features of Poland syndrome.

### **35. Sternal Variations : Embryological basis**

\***Shalini Sharma**, \*Archana Rani, \*Garima Sehgal, \*R.K. Diwan, \*P.K. Sharma and

**\*A.K. Srivastava**

\*Department of Anatomy, K.G. Medical University, U.P. Lucknow

Abstract: Human skeleton shows many variations that may occasionally necessitate distinction from pathological changes. The sternum is one of the parts of skeleton which displays frequent variations in appearance. In previous literature, various kinds of sterna variations and anomalies such as sternal foramina, suprasternal bones and tubercles, complete manubriosternal fusion, complete sternoxiphoidal fusion xiphoidal ( foramen, double ended xiphoid process are documented. During routine survey of osteology lab of anatomy department of K.G. Medical University, Lucknow, two sternii were showing variations, one with sternal foramen and the other with bifid xiphoid process. Awareness of a sternum for foramen is important in acupuncture practice and sternal marrow aspiration because of danger of heart damage. The embryological significance will be discussed during the presentation.

### **36. Structure of superior medullary vellum with special reference to neuronal tissue**

**Muktyaz Hussein\***, U.K. Gupta\*, Arvind Yadav\*, Arun Sharma\*, Vibhu Deep\*

\*Department of Anatomy, Govt. Medical College, Ambedkar Nagar U.P.; National Institute of Medical Sciences, Jaipur Rajasthan; LLRM Medical College, Meerut.

Abstract: The superior medullary velum (SMV) is a thin transparent, lamina of white matter, which stretches between the superior cerebellar peduncles: on the dorsal surface of its lower half the folia and lingual are prolonged. It forms, together with the superior cerebellar peduncle, roof of upper part of the fourth ventricle. It is narrow above, where it passes beneath the facial colliculi and broader below, where it is continuous with the white substance of the superior vermis.

Objective: To study the histological structure of SMV with special reference to neuronal tissue. Material and Methods: The present study was performed in department of Anatomy, Govt. Medical College Ambedkar Nagar. National Institute of Medical Sciences, Jaipur and L.L.R. M. Medical College, Meerut U.P. The materials used for present study comprises 32 human cadaveric brain which were dissected and SMV removed for histological processing slides were prepared and observed under microscope.

Result: The findings along with structure of SMV will be discussed during presentation.

Conclusion: Text Books of histology do not give any description of the SmV. The literature review indicates that there is paucity of finding on structure on structure of SMV. This study is first of its kind as we could not find any previous study from India or abroad reporting the structure of SMV.

**Key Words:** Superior medullary vellum, Structure and Clinical significance.

### **37. Histomorphometric study of human placenta**

**Potdar Pratishtha\***, Naik Deepak\*

Rama Medical College, Ghaziabad



Abstract: A comparative study of 50 hypertensive placentae was done to find out the morphological and histological changes with the placentae of 50 uncomplicated pregnancies in Department of Anatomy of Shyam Shah Medical College, Rewa ( Medya Pradesh) Morphological and histological changes occur due to meternal hypertension. On observation, mothers with moderate to severe Pregnancy Induced Hypertension. On observation, mothers with moderate to severe pregnancy induced hypertension had smaller, irregular placentae with marginal insertion of umbilical cord. Morphologically foci of calcification, infarction and thrombosis were found. Histological findings like cototrophoblastic cellular proliferation, syncytial knots, fibrin plaque formation were found in hypertensive placenta. Babies of such mothers were mostly small for date and few of them had birth asphyxia. Therefore, there is dire need to study, histomorphological changes in hypertensive pregnancy in detail.

### **38. Pesticides induced morphometric changes in the seminiferous tubules of albino rats**

**Archana Rani**, A. Sahai, A.K. Srivastava, Anita Rani, Jyoti Chopra  
Department of Anatomy, King George's Medical University, U.P., Lucknow

Abstract: Pesticides have the potential to cause reproductive toxicity in human beings. Pesticides, though present in the environment in small quantities, account for public and scientific concern due to their high biological activity. Carbaryl and Isoproturon were taken to see their effect on seminiferous tubules of albino rats. Three groups of animals, 8 in each group were taken for the present study i.e. control group low dose treated group and high dose treated group. After 60 days of experimental period, rats were anaesthetized by intraperitoneal administration of Nembutol and their testis was fixed by in vivo perfusion technique with Bouin's fixative. Tissues were processed for making paraffin wax sections and stained with haematoxylin and eosin. Micrometry was done to know the mean seminiferous tubular diameter with the help of an ocular and a stage micrometer. The diameter ( $\mu\text{m}$ ) was found to be  $247.354 + 10.79$  in control group,  $185.67 + 3.69$  in Carbaryl low dose group,  $184.29 + 5.98$  in Carbaryl high dose group,  $219.31 + 7.55$  in Isoproturon low dose group and  $176.65 + 7.08$  in Isoproturon high dose group. The diameters were decreased with both the pesticides and were highly significant. It was concluded that these pesticides adversely affect the morphology of the seminiferous tubules and may affect the fertility.

### **39. A Histoarchitectural Study of Varicocele**

M. Tariq Zaidi\*, Mohd Arshad\*, Aijai A Khan\*, SM Vasanwala\*  
\*Department of Anatomy, Pathology, JNMC, AMU, Aligarh

Abstract: Varicocele is an abnormal enlargement of vein of pampiniform plexus of veins draining the testis. The upward direction of flow of blood is directed by presence of one way valve within the vein that prevents back flow. Defective valves or compression of the vein by a nearby structure can cause dilatation of the veins of pampiniform plexus leading to formation of varicocele. The present study was carried out to see the effect of varicocele on histoarchitectural changes within the wall of vein of pampiniform plexus. The tissue were processed for paraffin embedding and stained with haematoxyline and eosin and weigert

stain and observed under light microscope. The varicocele group shows dilatation of lumen along with thickened wall. The increased thickness was all due to increased in thickness of both tunica intima and tunica media. In many cases the tunica intima folded with irregular folds along with discontinuity with endothelium. The tunica media shows increased thickness due to increase in both collagen fibers and smooth muscle cells.

**Key Words:** varicocele, pampiniform plexus, tunica media.

#### **40. Human Foetal Pancreas – Electron Microscopic Study**

**Dr Brijendra Singh\***, Dr Renu Gupta\*, Dr. Dushyant Agrawala\*, Dr Rajneesh Garg\*

Department of Anatomy, & orthopaedics, All India Institute of Medical Sciences  
Jodhpur and Manidhari Hospital, Jodhpur.

**Abstract :** Little is known about histogenesis of human foetal pancreas and lack of clarity for the origin of exocrine and endocrine part of it. Are they having common origin or different source of origin.

**Material and Method:** 12 fetuses were collected from the labor room of Department of Obstetrics and Gynaecology, All India Institute of Medical Sciences, Jodhpur within 8 hours of delivery and were preserved at 4°C to minimize the postmortem changes. Human pancreas were screened by haematoxyline and eosin staining and electron microscopy was done for suitable specimens to know ultrastructural details of foetal pancreas.

**Observation :** it was observed that the pancreas in the foetus was fleshy and multilobulated. Fibrous and connective tissue capsule was thin in the foetal pancreas. Observations also suggest that the foetal pancreas contains mainly ducts, few acini, many centroacinar cells, and large undifferentiated tissue. Acini were functional by 12th gestational week.

**Conclusion :** A close association between pancreatic acinar cells and endocrine cells indicate common germ cell origin.

**Key words :** Gestational weeks, foetal pancreas, electron microscopy, postnatal day, extracellular matrix, acinar cells.

#### **41. Prenatal Zidovudine induced renal changes in Swiss albino mice**

**Amit Nayak\***, Anand Mishra\*

\*Department of Anatomy, IMS, BHU, Varanasi.

**Abstract :** Although Zidovudine is widely used in pregnancy, its safety profile is yet to be determined. We have therefore given Zidovudine to pregnant mice in different doses to see its effect on kidney of the embryo.

**Material and Method:** Zidovudine was given to pregnant mice in doses of 50mg/kg, 100 mg/kg and 150 mg/kg whereas tap water was given to control mice from 6th day to 16th day of gestation. The female dams were sacrificed on 18th day of gestation by cervical dislocation and fetuses were dissected out by uterotomy. The kidney of mice embryos were dissected out, processed and were stained with H & E.

**Results:** The kidney of treated mice show inflammation and estruction in a doze dependent manner. The kidney of 50 mg/kg treated mice show reduction, necrosis and degeneration in renal corpuscles and tubules. The kidneys of 100mg/kg treated group shows widened areas of destruction of renal parenchyma and

further decreased density of corpuscles and tubules. The kidney of 150 mg/kg treated group shows heavy destruction and hyalinization of tubules and extremely low density of renal corpuscles.

Conclusion: Zidovudine causes a dose dependent insult on foetal kidney when given to mother during period of organogenesis.

#### **42. Zidovudine induced brain changes in Swiss albino mice**

**Anand Mishra\***, Mandavi Singh\*, Shamsheer Shrestha\*, Uttam Shrestha\*

\*Department of Anatomy, Institute of Medical Sciences, Banaras Hindu University

Abstract: Zidovudine is a nucleoside reverse transcriptase inhibitor that is used in HIV-1 virus and also used in pregnancy to control mother to child transmission (MTCT). In this experiment we try to observe changes in brain of mice when exposed to Zidovudine in utero. Zidovudine was given to pregnant mice orally in dose of 50 mg/kg and 100mg/kg from day 6 to 15 of gestation. Similarly control mice were given distilled water. On 18th day the dams were sacrificed and fetuses were collected by uterotomy. The brain were dissected out, formalin fixed processed and sections were cut at 8 $\mu$  which were later stained by hematoxylin and eosin. The brain of treated mice showed spongiform changes, degeneration and diminish migration of cells from the subventricular zone. This shows that Zidovudine has deleterious effects on brain and should be used with caution in pregnancy.

#### **43. Effect of menstrual cycle on female youngster**

**Keshav Kumar\***, MGM Medical College, Kamothe, Navi Mumbai

Abstract : Heart rate, respiratory rate, blood pressure, body temperature, sex desire appeared in the form of face / eye glow and blood concentration of oestrogen / progesterone hormones were recorded on 1st 7th 21st and 28th day of their menstrual cycle in 100 female youngsters of age group ranging between 16 to 25 years having menstrual cycles of 28 days and not suffering from any disease for three consecutive years to calculate the mean of recorded datas. It was found that sex desire appearing in the form of face / eye glow continuously increased during the first half of menstrual cycle and continuously decreased during the second half of menstrual cycle. This is known as "Principle of menstrual cycle based sex desire" put forth by Dr Keshav Kumar. Menstrual cycle based sex desire is directly proportional to blood concentration of oestrogen hormone and inversely proportional to blood concentration of progesterone hormone. Menstrual cycle based sex desire is maximum at the mid of menstrual cycle and minimum at the end of menstrual cycle. There was increase or decrease in the heart rate, respiratory rate, blood pressure and body temperature with the increase or decrease in the menstrual cycle based sex desire respectively.

#### **44. Role of introducing written examination in continuous internal assessment in Anatomy**

**Anita Rani\***, Archana Rani\*, Jyoti Chopra\*, Punita Manik\*, AK Srivastava\*

Abstract: We teachers, as evaluators are consistently realizing that the performance of our students in written examination does not meet with our expectations, which is an issue of constant worry among teachers as well as students. To get an insight of this young problem, reflections from the MBBS students of 2011 batch were taken. Very strong recommendation that came from student's side was incorporation of written examination apart from viva voce in day to day assessment. Thus in MBBS batch of 2012 written examination was introduced and in every region one stage was in written form. The pattern of test ( short answer type questions) was kept similar to that of internal examination. In year 2012, 21.90% students acquired passing marks in theory paper as compared to year 2011 in which only 5.24% students were pass, suggesting a clear benefit of written assessment in day to day exams.

#### **45. ULTRASONOGRAPHIC ESTIMATION OF GESTATIONAL AGE ON FOOT LENGTH BASIS**

**GL Nigam, Shilpa Gupta, Archana Sharma, Ketu Chauhan**

Abstract: The present study aims to correlate fetal gestational age by ultrasonographic measurement of fetal foot length.

Method: The present study was conducted in the Department of Anatomy in coordination with the Department of Radiodiagnosis, LLRM Medical College, Meerut in pregnant women during 2nd and 3rd trimester for routine fetal biometry. Foot length measured from heel to the end of big toe on plantar and lateral views weekly from 15 to 36 weeks of gestation.

Result: The earliest age at which fetal foot length could be seen sonographically was found to be 15 weeks of gestation and mean foot length is  $17.5 \pm 1.29$  and mean foot length at 36 weeks of gestation is  $64.4 \pm 3.28$ . From regression analysis a significant relationship has been observed between fetal foot length and gestational age ( $r^2 = 0.960$ ,  $p < 0.0001$ ).

Conclusion: Significant and linear relation between fetal foot length and gestational age was observed.

**Key words:** Fetal foot length, Gestational age, Ultrasonography.

#### **46. INTERACTION BETWEEN NON-STEROIDAL ANTI-INFLAMMATORY DRUGS AND H2 BLOCKERS IN NORMAL RATS**

**Dr. Vijay Shekhar Srivastava** and Dr. Nilam Nigam,  
Rohilkhand Medical College, Bareilly.

Abstract: Analgesics are frequently used for the relief of pain and antacids are indicated for simultaneous administration for acidity. Opioid analgesics have been reported to interact with H2 blockers and antihistaminic. To explore the interacting potentiality, in the present study the effect of combined treatment with non-opioid and H2 antagonists were examined in rats. Analgesic activity was studied with tail flick methods in rats. Non-opioid analgesics like Aspirin, Ibuprofen, Paracetamol, and Piroxicam was selected for study on per se and on concurrent administration with antacids such as famotidine and ranitidine. All non-opioid analgesics of non-Opioid analgesic activity by these drugs. On per se administration and with

concurrent administration of antacids, all Non-Opioid analgesies produce highly significant increase in reaction time. However, aspirin and paracetamol did not exert any effect initially

after 15 minutes of drug ingestion.

**Key words:** Antacids, Interaction, NSAIDS

#### **47. Supra Scapular Foramen in Indian Dry Scapula – A case report**

**Mr T Praveen**, Tutor in Department of Anatomy, Rama Medical College, Kanpur.

**Abstract:** Supra-scapular notch is roofed by superior transverse scapular ligament to converted into a foramen which provides a passage for suprascapular nerve. When it is completely ossified it manifests as supra-scapular foramen in dry scapula also. Variations of superior transverse scapular ligament include calcification, partial or complete ossification and multiple bands. Presence of this foramen in dry scapular is considered to be rare.

**Case Report:** During routine bone extraction from a male cadaver for our bone library, it was observed that the right scapula has completely ossified superior. Transverse scapular ligament. The ligament stretched across the entire length of the suprascapular notch of the right scapula to convert the notch into supra scapular foramen.

**Discussion:** The present case report indicates that complete ossification of superior transverse scapular ligament can occur in Indian population also which will become potential predisposing factor to suprascapular nerve entrapment syndrome.

**Key Words:** Superior transverse scapular ligament (STSL), calcification, foramen, suprascapular nerve entrapment syndrome.

#### **48. Split-hand / foot malformation type I with sensorineural hearing loss (SHFMID): A case Report**

**Vikas Anand**, Chandra Madhur Sharma, Manoj Kumar Meghwani

Department of Pediatrics, TB & Chest, Rama Medical College & Hospital & Research Centre, Kanpur.

**Abstract:** Split-Hand/Split-Foot Malformation (SHFM), also known as Ectrodactyly is a rare genetic condition characterized by malformation of the limbs with median cleft of the hands and feet and aplasia/hypoplasia of the phalanges, metacarpals and metatarsals. It has a prevalence of 1:10,000 – 1:90,000 worldwide. It can occur as an isolated malformation or in combination with other anomalies, such as tibial aplasia, craniofacial defects, genitourinary abnormalities and deafness. Split-hand/split foot malformation (SHFM) is a rare congenital anomaly. When present as an isolated anomaly, it is usually inherited as an autosomal dominant form. We report a rare case of Split-hand/foot malformation with sensorineural hearing loss.

#### **49. Variation of renal vein : Important clinical implication for designing of catheter.**

**Dr. Jolly Agarwal**, Dr. Virendra Kumar

Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly (U.P.)

**Abstract :** Variation of renal artery is more common than that of renal veins and the variations of renal veins are more common in the right kidney than the left kidney. These variations of renal vessels are important during kidney transplantation, trauma management diagnostic,

endovascular procedures and restrict availability of vein for mobilization procedures and must be kept in mind to prevent bleeding by an accidental lesion when operating in the retroperitoneal region.

Methods : The present study was conducted in the Department of Anatomy, SRMS IMS Bareilly. The materials used for study comprise 20 dissected cadavers i.e. 40 kidneys.

Observation and Results: In one cadaver we found two renal veins on right side and both drain into inferior vena cava. Additional renal vein was present retroureteral and drains into inferior vena cava close at the site of drainage of right gonadal vein below the opening of normal right renal vein. Right suprarenal vein drains into normal right renal vein instead of inferior vena cava. Right suprarenal vein is less in diameter as comparison to left suprarenal vein.

Conclusion: The level of entry of renal vein into inferior vena cava is important as these findings are clinically important for angiography, catheter design and planning portorenal shunt procedure.

### **50. Correlation of main renal artery diameter with the presence of an accessory renal artery in healthy voluntary kidney donors-a CT angiography based study.**

**Dr. Alka Nagar,**

Assistant Professor, Anatomy Department, Rama Medical College & Hospital, Kanpur.

Abstract: To investigate the relationship between the diameter of the main renal artery (mRA) and the presence of an accessory renal artery (aRA) by CT-angiography.

Material and Method: The study group consisted of 115 healthy kidney donors (92 women, 23 men; mean age 45 – 46 yrs) who presented to SGPGIMS ( in nephrology and radiology department) for voluntary kidney donation. All CT examinations were performed on a 64 slice CT scanner in arterial phase. The number of renal arteries supplying each kidney were evaluated and their diameters were measured.

Results: The mean diameter of mRA was 5.4 + 1.0 mm in kidneys without aRA and 4.6 + 10mm in kidneys

with aRA in right side and in left side the mean diameter of mRA was 5.59 + 1.12mm in kidneys without aRA and 4.7 + 1.2 mm in kidneys with aRA. The mRA diameter was smaller in kidneys with aRA that in those without aRAs( $p < 0.001$ ) in right side and  $p < 0.0001$  in left side).

Conclusion: The mRA diameter can predict the presence or absence of an a RA knowledge of the unrecognized presence of accessory arteries is important because they may be damaged during renal surgery and their presence must be considered in evaluating a diameter during renal surgery and their presence must be considered in evaluating a donor kidney for possible renal transplantation and renovascular reconstruction.

**Key words:** Renal artery, CT – angiography.

### **51. Celiacomesentric Trunk : An Unusual Variation**

**Garima Sehgal,** Archana Rani, R.K. Deewan, A.K. Srivastava, P.K. Sharma & Pallavi Ag  
Department of Anatomy, Department of Radiodiagnosis, King George's Medical University,  
U.P. Lucknow

Abstract: Variation in the branching patterns of the arteries that supply the digestive system may occur due to different embryological mechanisms. We presently describe the case of a 40-year old female in whom celiacomesenteric trunk (CMT) was incidentally detected on routine multidetector row computed tomography of abdomen, carried out in the department of Radiodiagnosis, KGMU, Lucknow. In the given case an arterial trunk was found originating from the aorta which soon gave off the celiac trunk as its branch and itself further continued as the superior mesenteric artery. Celiacomesenteric trunk accounts for less than 1% of all visceral artery anomalies as reported in previous literatures. Awareness of such variations can result in accurate interpretation of disease and vascular involvement, optimal selection of treatment options or operative planning and help avoid iatrogenic injury from surgical and interventional radiological procedures. The details of the present case along with embryological and clinical significance will be discussed during presentation.

## **52. TEMPOROMANDIBULAR JOINT ANKYLOSIS – A CASE REPORT**

**Ankita Raj**

Rama Dental College, Kanpur

Introduction: ANKYLOSIS OF TEMPOROMANDIBULAR JOINT (TMJ) Involves fusion of the mandibular condyle to the base of the skull. When occurs in a child, it can have devastating effects on the future growth and development of the jaw and teeth. Furthermore, in many cases it has a profoundly negative influence on the psychological development of the patient, because of the obvious facial deformity, which worsens the growth.

Case Report: A six year old boy came to the department of dentistry Rama Medical College, with inability to open mouth. Rounding of face on right side and flattening on the left side of face was seen with inter incisal distance of approximately two mm. Radiographic investigations included computed tomography which confirmed ankylosis of the right TMJ.

Discussion: The causes and treatment of TMJ ankylosis have been well documented with trauma and infection identified as the two leading causes. In children, TMJ ankylosis can result in mandibular retrognathism with attendant esthetic and functional deficits. Therefore, treatment should be initiated as soon as the condition is recognized, with the main objective of re-establishing joint function and harmonious jaw function.

## **53 ABDOMINAL AORTIC ANEURYSM WITH ABERRANT RENAL ARTERY - A CASE REPORT.**

**YogendraSingh, G.L.Shah\***

Mayo Institute Of Medical Sciences, Gadia, Barabanki, UP.

\*Institute of Medical Sciences, Banaras Hindu University, Varanasi, UP.)

Abstract : Aneurysm is a permanent and irreversible localized dilation of a blood vessel. Aneurysms can develop at anywhere in the arterial tree but are most commonly located in the aorta below the renal artery (infrarenal) and the segment immediately below the renal arteries is usually spared. We have reported a rare case of unruptured infrarenal abdominal aortic aneurysm (AAA) with right aberrant renal artery in a 60 year old male cadaver during routine posterior abdominal wall dissection for academic purpose in the department of anatomy, institute of medical sciences, Banaras Hindu University, Varanasi, UP, India. Aneurysms involving the immediate infrarenal segment are known as juxtarenal

AAAs. Most of the aneurysms are asymptomatic and associated with multifactorial risk factor. Most dangerous complication of AAA is rupture. Hence if we diagnosed aneurysm during screening in risk people to prevent it from rupture during abdominal surgery or other therapeutic and investigative procedures.