

**Conflicts of interest**

The authors have none to declare.

<http://dx.doi.org/10.1016/j.jasi.2016.08.071>

64

**Hepatotoxicity of valproate on fetal mice liver**

Pratibha Shakya\*, C. Mohanty, S.N. Shamal

*Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India*

**Aims and objectives:** Valproic acid is an antiepileptic drug. It acts by elevating GABA level in the CNS. It exerts therapeutic effects in a broad range of seizure (tonic-clonic, myoclonic, absence, partial) and bipolar disorder.

**Material and methods:** The present work was carried out in the Department of Anatomy, IMS, BHU, Varanasi to evaluate the cytotoxic effect of valproate on fetal mice liver. Pregnant mice were exposed to single dose (8th gestational day) and multiple dose (7th, 8th, 9th gestational day) of sodium valproate (200 mg/kg dose) intraperitoneally and fetuses were collected on 18th gestational day.

**Results:** The liver was smaller in size in valproate treated groups. Histologically, liver showed dilated central vein, breakage of endothelial lining of central vein, edema and extracellular matrix deposition around central vein. In the multiple treated groups, the liver cell nuclei were visible but cell outline was lost. Some of cells showing perinuclear condensation suggesting programmed cell death.

**Conclusion:** Valproate was found teratogenic at 200 mg/kg dose in mice fetus.

**Conflicts of interest**

The authors have none to declare.

<http://dx.doi.org/10.1016/j.jasi.2016.08.072>

65

**Development of spleen in intrauterine life**

Sonali Thomas\*, D.N. Sinha, A.K. Singh, D. Deopa, R. Niranjana

*Department of Anatomy, Government Medical College, Haldwani, Uttarakhand, India*

**Aims and objectives:** The present study is an attempt to find out variations in morphometry of fetal spleen at different gestational ages (14th–40th weeks).

**Material and methods:** Study was conducted on 24 fetus (14 male, 10 female) preserved in formalin. Fetuses were procured from Dr Sushila Tiwari Hospital, Haldwani, with permission from ethical committee. They were arranged in 3 groups – 1 (12–34 weeks); 2 (25–36 weeks) and 3 (>36 weeks). Parameters of spleen like length, breadth, thickness were measured by digital vernier calipers and weight was recorded by weighing scale. Results were documented and subjected to statistical analysis.

**Results:** The mean length (*L*), breadth (*B*), thickness (*T*), weight (*W*) of spleen in group 1 was 1.52 cm (*L*), 0.92 cm (*B*), 0.58 cm (*T*), 0.736 g (*W*). In group 2 was 2.80 cm (*L*), 1.94 cm (*B*), 1.04 cm (*T*), 3.557 g (*W*). In group 3 was 3.62 cm (*L*), 2.40 cm (*B*), 1.21 cm (*T*),

6.688 g (*W*). These parameters showed statistically significant correlation with increasing gestational age. The percentage ratio of spleen to fetal weight in group 1, 2, 3 was 0.147%, 0.258%, 0.285% respectively.

**Conclusion:** The present study showed an increasing trend in mean parameters of fetal spleen with increasing gestational age. Spleen belongs to reticuloendothelial system and performs both immunological and haematological functions. Splenic development is useful for determining its morphological study.

**Conflicts of interest**

The authors have none to declare.

<http://dx.doi.org/10.1016/j.jasi.2016.08.073>

66

**Morphological study of foetal kidney length in relation to gestational age**

Roli Joshi\*, D. Deopa, D.N. Sinha, A.K. Singh

*Government Medical College, Haldwani, Uttarakhand, India*

**Aims and objectives:** A true estimation of gestational age plays an important role in quality maternity care and scheduling the labour date. This study aimed to evaluate the normal fetal kidney length in relation to gestational age.

**Material and methods:** The study was done on 65 fetuses (male 36 and female 29) does not having any congenital anomalies were collected from Dr. Sushila Tiwari Memorial Hospital, Haldwani with due regards on ethical ground. After that all fetuses are preserved in 10% formalin. The measurements of both kidneys were taken from digital vernier caliper. Data were collected in three groups of gestational age G1 (10–20 weeks), G2 (20–30 weeks) and G3 (30–40 weeks).

**Results:** In all three groups the mean length of right kidney (cm) is 1.39, 2.37, and 3.73 while mean length of left kidney is 1.51, 2.53, and 3.83 respectively. The study established a significant and positive correlation ( $p < 0.000$ ) between the length of kidneys and gestational age. But there is no significant relation is found between kidney length in male and female fetuses. Maximum increase in kidney length was observed from group G2 to G3 (20–40 weeks).

**Conclusion:** The present data showed a normal range of fetal kidney length from early stages to full term of gestation. It may be useful in intrauterine assessment of development and early prenatal diagnosis of renal abnormalities.

**Conflicts of interest**

The authors have none to declare.

<http://dx.doi.org/10.1016/j.jasi.2016.08.074>

67

**Variations of abdominal aorta and its branches in fetuses of Manipur**

Jaishree Aribam Devi

*Regional Institute of Medical Sciences, Imphal, Manipur, India*

**Aims and objectives:** Abdominal aorta gives different branches to supply oxygenated blood to all the important organs in the abdominal cavity. Variations of abdominal aorta and its

branches are important during diagnostic procedures and abdominal surgery.

In view of the variations of abdominal aorta, its branches and their vertebral level and consequently the clinical importance depend on the vascular development of the aorta. The present study was carried out in the human fetuses of Manipuri origin.

**Material and methods:** Thirty fetuses ranging from 14 to 40 weeks of gestational age were collected. Prior permission and consent was taken from the institutional ethics committee and concerned parents. The fetuses were divided into four groups: Gr. I – 14–20 weeks, Gr. II – 21–27 weeks, Gr. III – 28–34 weeks and Gr. IV – 35–40 weeks. The level of termination of abdominal aorta, branches and their variations were examined thoroughly.

**Results:** The findings of the present study are documented as follows: Termination of abdominal aorta at L<sub>3</sub> – 2 cases (6.66%) and L<sub>5</sub> – 5 cases (16.66%). Celiac trunk communicated superior mesenteric artery – 3 cases (10%), Inferior phrenic artery arises as single trunk from celiac artery – 3 cases (10%) and arises from abdominal aorta – 2 cases (6.66%). Renal artery: double in 7 cases (23.33%) – Rt-2 (6.66%) and Lt-5 (16.66%). Accessory renal artery in 9 cases (30%) – Rt-5 (16.66%) and Lt-4 (13.33%). Gonadal artery arises as common trunk in 4 cases (13.33%), double (unilateral) gonadal artery – 9 cases (30%) – Rt-5 (16.66%) and Lt-4 (13.33%). Absence (agenesis) of middle sacral artery – 3 cases (10%). The variations of abdominal aorta and its branches are tabulated, discussed and compared with those of the previous workers.

#### Conflicts of interest

The author has none to declare.

<http://dx.doi.org/10.1016/j.jasi.2016.08.075>

68

#### Change in faculty's perspective after sensitization for need of competency based curriculum

Jyoti Chopra<sup>1,3,\*</sup>, A. Nischal<sup>2,3</sup>, A. Rani<sup>1,3</sup>, S. Awasthi<sup>2,3</sup>

<sup>1</sup> Department of Anatomy, King George's Medical University UP, Lucknow, India

<sup>2</sup> Department of Pharmacology, King George's Medical University UP, Lucknow, India

<sup>3</sup> Department of Medical Education, King George's Medical University UP, Lucknow, India

**Aims and objectives:** Over the years it has been realized that the medical graduates are failing to serve the health needs of the society and this has compelled medical educationist to do reforms in medical curriculum. MCI is planning to implement competency based curriculum (CBC) so that Indian Medical Graduate can serve as 'Physician of first contact'. As we move towards developing a competency-based approach to medical education in our country, it is crucial to sensitize and prepare the faculty for the change. The aim of present study was to sensitize faculty for need of implementation of CBC for medical graduates and training them to develop competency based curriculum.

**Material and methods:** A workshop was conducted on 'Developing Competency based curriculum' at KG Medical University, Lucknow. There were total 35 participants and they were divided into 5 groups of 7 each. Interactive sessions were held focusing on forming learning objectives and understanding competencies. In group activities, participants were given opportunity to frame learning objectives, prepare domains of learning and levels of com-

petency in their subject. Each group finally prepared and presented a curriculum with objectives, competency addressed, teaching-learning methods and assessment. Feedback of participants was taken and analysed.

**Results:** After workshop, the belief of participants that Competency based medical education has potential to make medical education more meaningful for students and society increased from 52.1% to 76%, and 44% to 82.4% respectively. Before workshop 70.98% participants stated that they have little or no ability to design CBC whereas after workshop 92.8% found themselves moderately to nearly completely competent.

**Conclusion:** Such faculty development workshops are effective way of sensitizing the faculty as it helps them in understanding the underlying motive and changing their perspective. Hands on training help them in giving concept of framing competency based curriculum in their own subject.

#### Conflicts of interest

The authors have none to declare.

<http://dx.doi.org/10.1016/j.jasi.2016.08.076>

69

#### Exploring webpages and publications related to 3D medical animations and discussing its scopes of implications in medical education



Govindda Akbari\*, S.P. Rathod, A.M. Pandya

Department of Anatomy, PDU Medical College, Rajkot, Gujarat, India

**Aims and objectives:** The study aimed at discovering the available materials in the field of 3D medical animations over the Internet and their current uses; simultaneously evaluating their possible integration in medical education and practice.

**Material and methods:** The study was performed at Department of Anatomy, PDU Medical College, Civil Hospital, Rajkot, Gujarat, India in June 2015, which consisted of a series of keyword searching into Google and exploring various web pages related to 3D animations in medical field. Additionally, it was supplemented by use of browsing assistant tools called browser plugins/Add-Ons. The websites were bookmarked, classified and arranged into bookmark folders according to their categories.

**Results:** Most of the websites belonged to commercial categories operated by various animation institutes, commercial, pharmaceutical or related companies, and developers in waiting period of bulk orders from the institutions, also promoting their works in YouTube and other video websites to expand them. These results were interpreted based on the contents they wrote in their pages. Only few websites are found as an open source which provided free downloadable animations for educational purpose. So more extended versions of this study are planned to serve the current study objectives further.

**Conclusion:** Bigger e learning start-ups who follow usually their own strategies of delivering contents into education field needs to be integrated. A handful of webs are found which actually serve. The GOOGLE WAY, i.e. delivering basic services free to their terminal users.

#### Conflicts of interest

The authors have none to declare.

<http://dx.doi.org/10.1016/j.jasi.2016.08.077>