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Effect of vitamin E in heat stress induced testicular damage of Wistar Albino rats

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Background: Heat stress is one of the most important stressors especially in hot regions of the world. Spermatogenesis and normal testicular function are both temperature dependent. There is compelling evidence that there is a correlation between male infertility and testicular heat stress. Since oxidative stress is the major source of damage after testicular heat stress, it seems logical that antioxidant can prevent germ cell apoptosis and sperm damage.

Aims and objectives: To observe the effect of Vitamin E against heat stress induced testicular damage.

Materials and methods: Thirty-two healthy Wistar Albino rats weighing 130–200 g were randomly divided into 4 groups i.e. group I (control) and group II (vitamin E), III (heat stress), IV (heat stress with vitamin E) each consisting of 8 rats. Rats belonging to group I and II were kept in controlled room temperature of ($25 \pm 0.5^{\circ}C$) and rats of group III and IV were kept in controlled room temperature of ($37 \pm 0.5^{\circ}C$) for two weeks. In addition, rats of group II and IV were injected 200 mg/kg of vitamin E intraperitonally. On 15th day all rats were sacrificed and testes was removed and processed for slide preparation and were observed for histological changes. Paired *t*-test and one way ANOVA were used for data analysis at 95% confidence interval.

Results: Heat stress caused decrease in body weight, testicular weight and size of kidney. Histological study showed decrease in diameter and necrosis of epithelial lining of seminiferous tubule in rats under heat stress. Vitamin E showed partially protective effect against heat stress.

Conflicts of interest

The authors have none to declare.

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Variations in origin of vertebral artery – fetal study

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Introduction: Significance of vertebral artery in four vessel angiography and diagnostic interventions lines the importance of its anatomic variations.

Objective: To study the anatomic variations in origin of vertebral artery.

Methods: 25 fetuses were collected from the department of obstetrics at GMC, Thrissur. Fetal dissection was done by thoracotomy. Vertebral artery was traced up to its entry in foramen transversarium.

Results: Of the 25 fetuses dissected, two foetuses showed anomalous origin of left vertebral artery from arch of aorta and which entered foramen tranversarium at C4 and C5 vertebral levels.

Conclusion: Origin of left vertebral artery from arch of aorta suggests that part of aortic arch arises from 7th intersegmental artery or there was increased absorbtion of embryonic tissue of left subclavian artery between origin of aortic arch and left subclavian artery.

Genetic aspects: 22q 11 deletion is reported in anomalous origin of vessels from arch of aorta.

Clinical significance: Prior identification of vascular anomalies through diagnostic interventions crucial because anomalous origin of vessels affects hemodynamics predisposing to aneurysm and increased risk of CVA.

Conflicts of interest

The authors have none to declare.

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Congenital aplasia of posterior arch of atlas: a case report

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Objective: To study congenital aplasia of posterior arch of the atlas and to differentiate it from other pathological causes of deficient posterior arch of atlas viz acute burst fracture, neoplastic spinal lytic lesions, etc.

Method: The variation was observed during routine osteology tutorial; same will be presented.

Result: Failure of posterior midline fusion of the two hemiarches of the atlas corresponding with Type A of the Curriano classification was observed.

Conclusion: The reported incidence of congenital aplasia of posterior arch of atlas is approximately 4%. This anomaly is predominantly seen in children and women in their second and third decade of life. Diagnosis should be considered in cases of neck pain. X-rays, CT and MRI images are the mainstay for diagnosis of this lesion. Atlas arch defects should be differentiated from neoplastic lytic spinal pathology, osteolysis, acute burst fracture, etc.

Keywords: atlas, congenital anomaly, atlas aplasia.

Conflicts of interest

The authors have none to declare.

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Prepancreatic portal vein — a case study

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Aims and objective: Pre-pancreatic portal vein is extremely rare. This rare anomaly was first described by Brook and Gardner in 1972. It is most commonly found incidentally during diagnostic imaging and during exploration for unrelated pathology.

Methods: We found this rare anomaly during routine dissection of cadaver in our Department of Anatomy at AMCH.

Result: One pre-pancreatic portal vein observed.

Conclusion: Knowledge of such anomalies (although very rare) is very important prior to surgical or percutaneous interventions involving the biliary tree, liver or pancreas, to avoid potentially

devastating injuries to the portal vein which could result in liver ischaemia or massive haemorrhage.

Conflicts of interest

The authors have none to declare.

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A morphological variations of suprascapular notch in dried human scapulae in S.M.S. Medical College, Jaipur

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Introduction: The supra scapular notch is a semicircular notch, located at the superior border of the scapula, just medial to the base of the coracoid process. It constitutes the main site of compression of the suprascapular nerve. Suprascapular nerve supplies motor branches to supraspinatus, infraspinatus muscles, and sensory branches to the rotator cuff muscles, and the ligamentous structures of the shoulder and acromio-clavicular joint.

Morphological variations of the suprascapular notch are very important clinically because it is the predisposing factors for compression of the suprascapular nerve in this region and leads to suprascapular nerve entrapment syndrome.

Materials and methods: The present study was done on 200 human dried scapulae at S.M.S. Medical College, Jaipur (Raj). The age, sex and race of the scapulae were unknown. The scapulae were observed for the different shapes of the suprascapular notch.

Results: This study showed seven different types of suprascapular notches. The scapulae 96 were found with U shaped, 40 V shaped, 52 J shaped, 03 scapulae with indentation, 02 with partial ossification, 01 with 'o' shape [foramen] and 06 with no notch.

Conclusion: The study of variations of suprascapular notches are of great help to anatomists as well as to clinicians for early diagnosis of suprascapular nerve entrapment syndrome.

Conflicts of interest

The authors have none to declare.

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Horseshoe kidney: a case report

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Introduction: Horseshoe kidney, also known as *ren arcuatus* (in Latin), renal fusion or super kidney, is a congenital disorder affecting about 1 in 600 people, more common in men.

In this disorder kidneys fuse together to form a horseshoe shape during development in the womb. The fused part is the isthmus of the horseshoe kidney.

Material and method: Horse shoe kidney was found in approximately 68 years old male cadaver during routine dissection for undergraduate teaching in the Department of Anatomy, S.M.S. Medical College, Jaipur.

Results: Both the kidneys were joined at their lower poles by an isthmus. The isthmus was in front of intervertebral disc between third and fourth lumber vertebra. The connecting bridge was well developed and measured about 37 mm × 43 mm size. The maximum width of right and left kidneys were 42 mm and 46 mm, respectively.

Conclusion: Horseshoe kidney is a congenital malformation which may predispose the patient to numerous complications including hydronephrosis and loss of renal function.

Conflicts of interest

The authors have none to declare.

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Origin of accessory/aberrant renal arteries with their clinical significance: a case report

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During routine dissection for under graduate students we came across a case of accessory renal artery on the right side in a 60 year old male cadaver. It was originated directly from aorta superiorly to that of the right renal artery and was running parallel to the same for a distance of about 4.6 cm and then it was divided into two (superior and inferior) branches which were entered through the hilum.

In the same cadaver on the left side we found superior and inferior aberrant renal arteries arising from the left renal artery.

The kidneys of both sides were normal in shape and size. The possible embryological basis of this unusual malformation as well as risk factors associated with this condition will be discussed. These anomalies assume great significance to the urologists, especially during renal transplantation.

Conflicts of interest

The authors have none to declare.

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Subhepetic position of the vermiform appendix – a case finding

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Introduction: The vermiform appendix is the most variable abdominal organ in terms of position, extent, peritoneal and organ relations. The location of appendix is important when it comes to clinical presentation of a patient with appendicitis.

Case report: During regular dissection classes of first year medical undergraduates, variation in the position of appendix with adhesion were noted in a male cadaver aged approximately 50–55 years.

Subhepetic position of appendix might congest the subhepetic region and minimize the intestinal movements. The knowledge of this type of variations may be useful for the radiologist and surgeons.