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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 ($25 \pm 0.5^\circ\text{C}$) and rats of group III and IV were kept in controlled room temperature of ($37 \pm 0.5^\circ\text{C}$) for two weeks. In addition, rats of group II and IV were injected 200 mg/kg of vitamin E intraperitoneally. 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 transversarium 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 absorption 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 hemi-arches 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