Results: A significant correlation of sex determination was found with iliac length in age more than 6 months and posterior sciatic notch length in age less than 6 months of intrauterine life.

Conclusion: Sexual dimorphism exists from an early age of intrauterine life and sexing could be established almost up to 100% as male or female by using a single or a combination of various parameters of fetal ilium.

Conflicts of interest

The authors have none to declare.

http://dx.doi.org/10.1016/j.jasi.2017.08.074

68

Effect of prenatal desvenlafaxine exposure on behavioural alteration in Swiss albino mice

Amrita Kumari*, Mandavi Singh, Vinod Kumar

Indira Gandhi institute of Medical Sciences, Patna, India

Introduction: Desvenlafaxine is newer serotonin and nor-adrenaline reuptake inhibitor which is functionally different from other typical antidepressants.

In addition to serotonin and nor-adrenaline reuptake inhibition, it also causes slightly dopamine reuptake inhibition.

Purpose: To check for its deleterious effect in the pregnant women as there are paucity of reports regarding this newer antidepressant.

Methods: Adult female Swiss albino mice weighing between 25 and 30 g were mated with male mice in the ratio of 2:1. Female mice discovered with vaginal plug were given desvenlafaxine via oral gavage in the dose of 80 mg/kg body wt from gestation day 1 to gestation day 6 and day 1 to day 18 of gestation. Control group of mice received water in same dose via same route. These mice were allowed to deliver and subjected to Water Morris behavioural test at the age of 8 weeks.

Result: Water Morris behavioural test was performed to test for the effect of drug on spatial learning and memory. In early session, no significant difference was found in the time taken by offspring of different group to find hidden platform. In further sessions, offspring of group 2 (drug given for day 1 to day 6 of gestation) took less time to reach platform than offspring of 1 and 3.

Conclusion: Above findings suggest that desvenlafaxine interferes with the normal neuronal development and thus affect learning and memory. The degree of degeneration increases as we increase the dose and duration of drug exposure. Other details will be discussed during presentation in conference.

Conflicts of interest

The authors have none to declare.

http://dx.doi.org/10.1016/j.jasi.2017.08.075

69

Chromosomal aberrations in mental retardation: A preliminary study

Debasis Bandopadhyay

Armed Forces Medical College, Pune 411040, India

Background: Chromosomal abnormalities that alter developmental gene expression are the most common cause of mental retardation. Approximately 10% of mental retardation cases suffer from chromosomal abnormalities. Telomeric regions of chromosomes are the most gene-rich regions and any deletion or alteration in this region had been reported to account for nearly 2.5% of mental retardation cases, with or without dysmorphic features. Our study focussed on chromosomal aneuploidies and large structural defects in idiopathic mental retardation detected using conventional cytogenetic technique by peripheral blood karyotype. A total of 30 cases of idiopathic mental retardation were referred for genetic analysis to Cytogenetic Lab, Dept of Anatomy, from May 2013 to April 2016. A peripheral blood karyotype was carried out in all patients.

Methods: 5 ml of venous blood was cultured for leucocytes and subsequently karyotyped using standard protocol of Trypsin Giemsa banding. The slides were visualised for metaphase spread under oil immersion and 20 cells were captured in every case for analysis using Cytovision software.

Results: Cytogenetic analysis of peripheral blood of 30 cases of idiopathic mental retardation revealed 02 Down syndrome mosaic males, 01 Down syndrome female with 14/21 translocation, 01 Fragile X Syndrome male and 26 cases with normal karyotype.

Discussion and conclusion: In our study only 04 out of 30 cases of idiopathic mental retardation showed chromosomal anomaly analysed by peripheral blood karyotype. Genetically determined mental retardation aetiology (comprising chromosomal aberrations, single-gene disorders, and other genetic conditions) account for 17–41% of cases, depending on the different techniques of genetic analysis. Karyotype is gold standard investigation for aneuploidies and large structural defects however small deletions and alterations on chromosome are often missed in conventional cytogenetic procedures. Hence it is suggested that newer molecular cytogenetic techniques like microarray and purely molecular techniques like polymerase chain reaction (PCR) be used to diagnose submicroscopic aberrations which account for majority of aetiologically undiagnosed cases of mental retardation.

Conflicts of interest

The author has none to declare.

http://dx.doi.org/10.1016/j.jasi.2017.08.076

70

Effect of carbamazepine on fetal brain

Singh Deepshikha*, Mohanty Chhandamayee

Institute of Medical Sciences, Banaras Hindu University, Varanasi, India

Aims and objectives: Carbamazepine is one of the most widely used anti-epileptic drugs among women of child bearing age. This study aims to investigate the morphological and histopathological teratogenic effects of carbamazepine use during pregnancy.

Materials and methods: The healthy pregnant female mice were divided into two groups. The control group received equivalent quantity of distilled water by intraperitoneal route on 7th day of gestation. Second group received 30 mg/kg of carbamazepine by