45,X/46,X i (X) (q10) isochromosome Xq in Mosaic Turner syndrome: A case report

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Isochromosome Mosaic Turner Syndrome (IMTS) is a variant of Turner Syndrome (TS) characterized by cytogenetic profile of 1 or more additional cell lineages aside from 45,X, and the presence of a structurally abnormal X chromosome consisting of either two short or two long arms. IMTS is rare, with only 8-9% prevalence among women with TS based on international studies, and 15% of all TS in the Philippines. A 20 year old female came in due to amenorrhea and alopecia. Physical examination revealed short stature, cubitus valgus and Tanner Stage 1 pubic hair and breast development. Transrectal ultrasound revealed absent ovaries and infantile uterus. Hormonal evaluation revealed hypergonadotrophic hypogonadism. Bone aging was that of a 13 year old for females with non fusion of epiphyseal plates. Cytogenetic study revealed 45,X [37]/46, X, i (X) (q10) [13]. This is consistent with a variant Isochromosome Mosaic Turner Syndrome. She was screened for medical complications. Audiogram and two-dimensional echocardiography were unremarkable. She has dyslipidemia and was given statins. She has subclinical hypothyroidism with positive test for anti-thyroglobulin antibody. Her intelligence quotient (IQ) was below average. She received conjugated estrogen and progesterone that patterned the hormonal changes in normal menstrual cycle. On the third week of hormonal therapy, she developed breast mound and on the fourth week, she had her first menstrual period. Her alopecia resolved spontaneously. The above case is a rare variant of Turner Syndrome requiring supportive, medical and psychological care

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Biochemical and electron microscopic changes induced by Giardia in experimentally infected lambs

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The present study was conducted to evaluate the effect of Giardia on the biochemical serum constituents of experimentally infected lambs, in addition to studying the observed alterations accompanying Giardia infection in the intestinal mucosa using scanning electron microscopy. Twenty lambs were allotted into two equal groups, Group A (infected) was orally inoculated by 104 Giardia cysts and Group B (non infected) was kept as control negative. The biochemical changes were assessed in both groups on 7th, 14th, 21th and 30th days post inoculation (dpi). The study disclosed that Giardia induced a significant drop in the levels of serum electrolytes (Cl, Na, K), blood glucose, different enzymes (lipase, amylase Alkaline phosphatase. Furthermore, the levels of urea, liver enzymes (alanine aminotransferase and aspartate aminotransferase), inflammatory marker (C-reactive protein) and oxidative stress markers malondialdehyde was elevated, but nitric oxide was declined from 21st day post infection till 30th day. The scanning electron microscopy of the intestinal mucosa of the infected lambs revealed a notable alteration which was fully explained. All the presented results interpret the pathophysiological effect of Giardia which adversely affects the health status of lambs.

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