Short Communication

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Ring Chromosome and Clinical Findings: Reports Cases of 4 Different Chromosomes in Beninese Population

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Abstract

Ring chromosome is a disorder in which one or both ends of chromosome are lost and joined, so they could show a ring-shaped structure. Patients with ring chromosome could therefore present with features of deletion of long or short arms of the chromosome syndromes or a combination of both. Phenotypic of these individuals depends on the size of the ring chromosome, amount of genetic material lost in breakage, the stability of the ring chromosome and the presence of secondary chromosomal aberrations including the varying degrees of mosaicism. Ring chromosomes accounts for a very low percentage of structural chromosomal abnormalities but could lead to a major clinical concern and complicated genetic counseling. Practitioner awareness must be permanently raised up to help in managing with efficacy patient with ring condition. We report here 4 cases of ring on chromosome 4, 9, 15 and X. We described their clinical finding and draw attention on common key signs that were present in the reported cases and also discussed recurrence risk. A ring chromosome is a chromosome whose arms have fused together to form a ring. Ring chromosomes were first discovered by Lilian Vaughan Morgan in 1926. Constitutional ring chromosomes have been identified for each of the human chromosomes and the overall frequency is estimated at 1 in 27:000 to 62:000 births [2]. Rings result from rare intrachromosomal fusions although mechanisms underlying chromosomal ring formation are not completely understood. These fusion events are hypothesized to arise from either unstable telomeres, which directly fuse, or from chromosomal breaks that resolve by fusion of the two chromosomal arms. Phenotype of these individuals depends on the size of the ring chromosome, amount of genetic material that is lost in breakage, the stability of the ring chromosome and the presence of other type of chromosomal abnormalities including mosaicism.

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Biography

Azonbakin S Faculty of Heath Sciences, University of Abomey, Calavi, Cotonou, Benin this is so for the reason that, when an environment, surrounding, or atmosphere is hygienic the lives of those in that community are not threatened by pollution, illness and disease, in that way creating a sustainable environment. The Azonbakin S Aderomose is a senior research fellow at the Institute of Abomey, Calavi. He is in the third year of her Ph.D and is a holder of DST-INSPIRE fellowship. He is in the third year of her Ph.D. Phenotypic of these individuals depends on the size of the ring chromosome, amount of genetic material lost in breakage, the stability of the ring chromosome and the presence of secondary chromosomal aberrations including the varying degrees of mosaicism.

Keywords: STR, Genetic diversity, Filiation test, Forensic identification, Legal medicine.

