CHROMOSOME FRAGILE SITES

Summary

Fragile sites on chromosomes are the sites which exhibit tendency towards breaks and gaps under specific conditions of *in vitro* cultured cells, and after induction with chemical agents. They are categorised as either rare and common. Fragile sites are evolutionary conserved. They are observed in all organisms and play a significant role as far as an occurrence of gene and chromosome disorders in animals and humans is concerned, thus constituting instable regions of the genome. The instabilities may initiate inappropriate expression of genes determining various characteristics. They may give rise to developmental disorders, high mortality at an early stage of life, poorer animal liveability and reproduction as well as tumour expansions. Fragile sites constitute a subject of cytogenetic studies in diagnosing genetic disorders. They can also serve as a selection tool in an assessment of health, and identification of individuals with genetic disorders.