PAEDIATRIC DERMATOLOGY

A NOVEL ANTXR2 MUTATION IN HYALINE FIBROMATOSIS SYNDROME WITH FATAL OUTCOME IN AN INDIAN CHILD

V Mendiratta [1] - R Pangti [2] - V Ramprasad [3] - S Singh [4]

Lady Hardinge Medical College, Dermatology And Std, New Delhi, India [1] - All India Institute Of Medical Sciences, Dermatology And Std, New Delhi, India [2] - Medgenome, Genomics, Chennai, India [3] - Lady Hardinge Medical College, Pathology, New Delhi, India [4]

Background: Hyaline fibromatosis syndrome (HFS) is a very rare disease caused by mutation in gene encoding for capillary morphogenesis protein 2(CMG2) located on chromosome 4q21. It is characterized by multiple subcutaneous nodules, gingival hypertrophy, joint contractures and hyaline deposition.

Observation: A 2 months old infant, birth order third, product of third degree consanguineous marriage, presented with hyperpigmented plaques and joint contractures since birth. Parents reported similar complaints in their second born who survived only for five months and died due to diarrheal illness. Presence of dark brown colored plaques of size 1.5*0.5cm were noted over metacarpophalangeal, proximal interphalangeal joints and medial, lateral malleoli. Presence of tender, flexion contractures with restricted range of movements was noted at elbow, wrist, knee and ankle joints. There was no other abnormality seen. One month later, child developed a pinkish, fleshy pea sized plaque over left side of chest and swelling in both shoulders and elbow joints. Histopathological examination was consistent with HFS. Genetic studies showed a novel mutation homozygous 5' donor splice site variation in intron 2 of the ANTXR2 gene (chr4:80992736C>T) that affected the invariant GT donor splice site downstream of exon 2 (c.224+1G>A;ENST00000307333). The mutation was homozygous in the affected patient, heterozygous in both parents while it was not found in the live sibling. There are 42 mutations identified in CMG2 gene in HFS patients till now. This ANTRX2 variation has been classified as a likely pathogenic variant. The child died at the age of one year because of recurrent infections.

Key message: This study adds another novel mutation to the database. Knowledge of various mutations in ANTXR2 gene can be helpful to identify heterozygous carriers in extended families with history of affected children. Thus, prenatal testing, preimplantation genetic testing, genetic counseling will enable carrier parents to plan pregnancy in consanguinous marriages.