

A case report of a girl with short stature has laron syndrome and spondyloepimetaphyseal dysplasia

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Hospital 1armed forces hospital , khamis mushiest, Saudi Arabia. 2king Khalid university, abha, Saudi Arabia Abstract.

20 months old girl has frequent hypoglycemias, protruding forehead(frontal bossing), sunken bridge of the nose (saddle nose), and a blue tint to the whites of the eyes (blue sclerae). short limbs compared to the size of her torso, as well as small hands and feet, fragile thin hair,short limbs, Genu varum, Brachydactyly ,malar flattening, motor delay, delayed teeth eruption, when plotted to growth chart height found far below the third centile for age,sex,population, Her laboratory investigations were normal a part from low IGF1 31- ng/ml (58-282), IGFBP3 1602- ng/ml (2010-5432), skeletal survey of the pt showed:chest narrowing, short ribs, and broad and short bones in the extremities and pelvis, small foramen magnum, short femoral neck, flared metaphysis, Molecular genetic analysis of whole exome sequencing(WES) showed a result of: clinically relevant variants with significant phenotypic overlap in the baby..

1-Gene :GHR

omim-p:604271/262500

transcriptNM_000163,4

variant c.positionc.281G>A

variant p.position:p.(Trp94)

zygosity:homo

ACMG class:pathogenic

2-Gene:ACAN

Omim-p: 612813/608361/165800

transcript:Nm_013227,3

variant c-position:c.1432G>T

variant p.positionp: p.(val478Phe)

zygosity: homo

ACMG: uncertain significance

interpretation:mutations in GHR is AD to recessive partial GH insensitivity and AR Laron syn/dwarfism

WES identified homo Z nonsense variant as above in results in exon 5 of the GHR gene,wich is not described befor in any darabase.

It also showed Homo missense variant as above in results in exon 8 of ACAN gene which has not been described in any database.

Taken together the detected homozygous GHR variant and homozygous ACAN variant may contribute to the mixed complicated clinical picture in this baby girl, making management is complicated.

Whether giving IGF1 analogue will be effective or not and how the patient will progress clinically over time.

