

GENETIC DISORDER REPORT

Genetic Disorder: Mitochondrial genetic inheritance disorders

Subclass: Leigh syndrome

----- PATIENT DETAILS -----

patient_age: 65
father_age: 90
mother_age: 90
gender: Female
genes_mother_side: Yes
inherited_father: No
maternal_gene: Yes
paternal_gene: No
blood_cell_count: 6.824555
white_blood_cell_count: 8000
respiratory_rate: 16
heart_rate: 78
parental_consent: None
follow_up: None
birth_effects: None
folic_acid_intake: None
blood_test_result: Yes
No_of_previous_abortion: None

----- DESCRIPTION -----

Okay, let's break down Leigh Syndrome, focusing on the aspects you requested, and keeping it in under

****Leigh Syndrome: A Simple Explanation****

- * ****Overview:**** Leigh syndrome is a severe, progressive neurological disorder that affects the central nervous system.
- * ****Causes:**** The root of Leigh syndrome is a problem with ****mitochondria****. Mitochondria are tiny structures within cells that produce energy for the body.
 - * Most Leigh syndrome cases are caused by genetic mutations (changes) that are passed down from the mother.
 - * ****Mitochondrial DNA (mtDNA):**** This DNA is inherited *only* from the mother.*
 - * ****Nuclear DNA:**** This DNA is inherited from *both* parents.*
 - * There are dozens of different gene mutations that can cause Leigh syndrome.
 - * In summary, it can be caused by a mutation in the mitochondrial DNA, which is inherited from the mother.
- * ****Symptoms:**** Leigh syndrome symptoms vary, but generally include:
 - * ****Developmental Delays/Regression:**** Loss of previously acquired skills (like crawling, walking, talking).
 - * ****Muscle Problems:**** Weakness, poor muscle tone (hypotonia), stiffness (spasticity), involuntary movements.
 - * ****Movement Problems:**** Difficulty with coordination, balance, and walking (ataxia).
 - * ****Breathing Problems:**** Irregular breathing patterns, rapid breathing (hyperventilation), or periods of apnea.
 - * ****Feeding/Swallowing Difficulties:**** Problems with sucking, swallowing, and gaining weight.
 - * ****Vision Problems:**** Optic atrophy (damage to the optic nerve), nystagmus (involuntary eye movements).
 - * ****Seizures:****
 - * ****Lactic Acidosis:**** A buildup of lactic acid in the body, which can cause vomiting, fatigue, and breathing problems.
- * ****Risk Factors:****
 - * ****Family History:**** Having a family history of Leigh syndrome or other mitochondrial disorders increases the risk.
 - * ****Specific Genetic Mutations:**** Knowing that you carry a specific gene mutation associated with Leigh syndrome.