GENETIC DISORDER REPORT
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Genetic Disorder: Mitochondrial genetic inheritance disorders
Subclass: Leigh syndrome

----- PATIENT DETAILS -----
patient_age: 20
father_age: 45
mother_age: 45
gender: Female
genes_mother_side: Yes
inherited_father: Yes
maternal_gene: No
paternal_gene: No
blood_cell_count: 5000
white_blood_cell_count: 7000
respiratory_rate: 15
heart_rate: 72
parental_consent: Yes
follow_up: Medium
birth_effects: Yes
folic_acid_intake: Yes
blood_test_result: Abnormal
No_of_previous_abortion: 1

----- DESCRIPTION -----
Okay, let's break down Leigh Syndrome, focusing on the mitochondrial genetic inheritance aspect.

Leigh Syndrome: Explained

*   **Overview:** Leigh syndrome is a severe, progressive neurological disorder that typically appears in
    *   **Think of it like:** The central nervous system (brain and spinal cord) starts to "break down" or m

*   **Causes:** The primary cause lies in problems with the *mitochondria*, which are the "powerhouses

    *   This malfunction in mitochondria can stem from genetic mutations (changes in DNA) that affect the
    *   **Crucially:** A significant proportion of Leigh syndrome cases involve *mitochondrial DNA (mtDN
    *   **Simplified:** Imagine your cells need fuel to run, and the mitochondria are the fuel factories. In L

*   **Symptoms:** Symptoms can vary a lot from person to person, but common ones include:

    *   **Early Development Problems:** Delayed motor skills (like sitting, crawling, walking), failure to th
    *   **Movement Issues:** Muscle weakness, problems with coordination (ataxia), jerky movements (c
    *   **Neurological Problems:** Seizures, vision problems (e.g., nystagmus - involuntary eye moveme
    *   **Respiratory Issues:** Breathing difficulties, which can sometimes be severe.
    *   **Gastrointestinal Issues:** Vomiting, diarrhea.
    *   **Heart Issues:** Hypertrophic cardiomyopathy (enlarged heart)
    *   **Important:** Symptoms can appear suddenly or gradually worsen over time. During stressful sit

*   **Risk Factors:**

    *   **Family History:** The biggest risk factor is having a family history of mitochondrial disorders or u
    *   **Maternal Inheritance (for mtDNA-related cases):** If a mother carries a mutated mtDNA, there is
    *   **Genetic Mutations:** Specific mutations in genes known to cause mitochondrial dysfunction are

*   **Treatment:** Unfortunately, there is *no cure* for Leigh syndrome. Treatment focuses on managing