Acute Promyelocytic Leukemia (APL)

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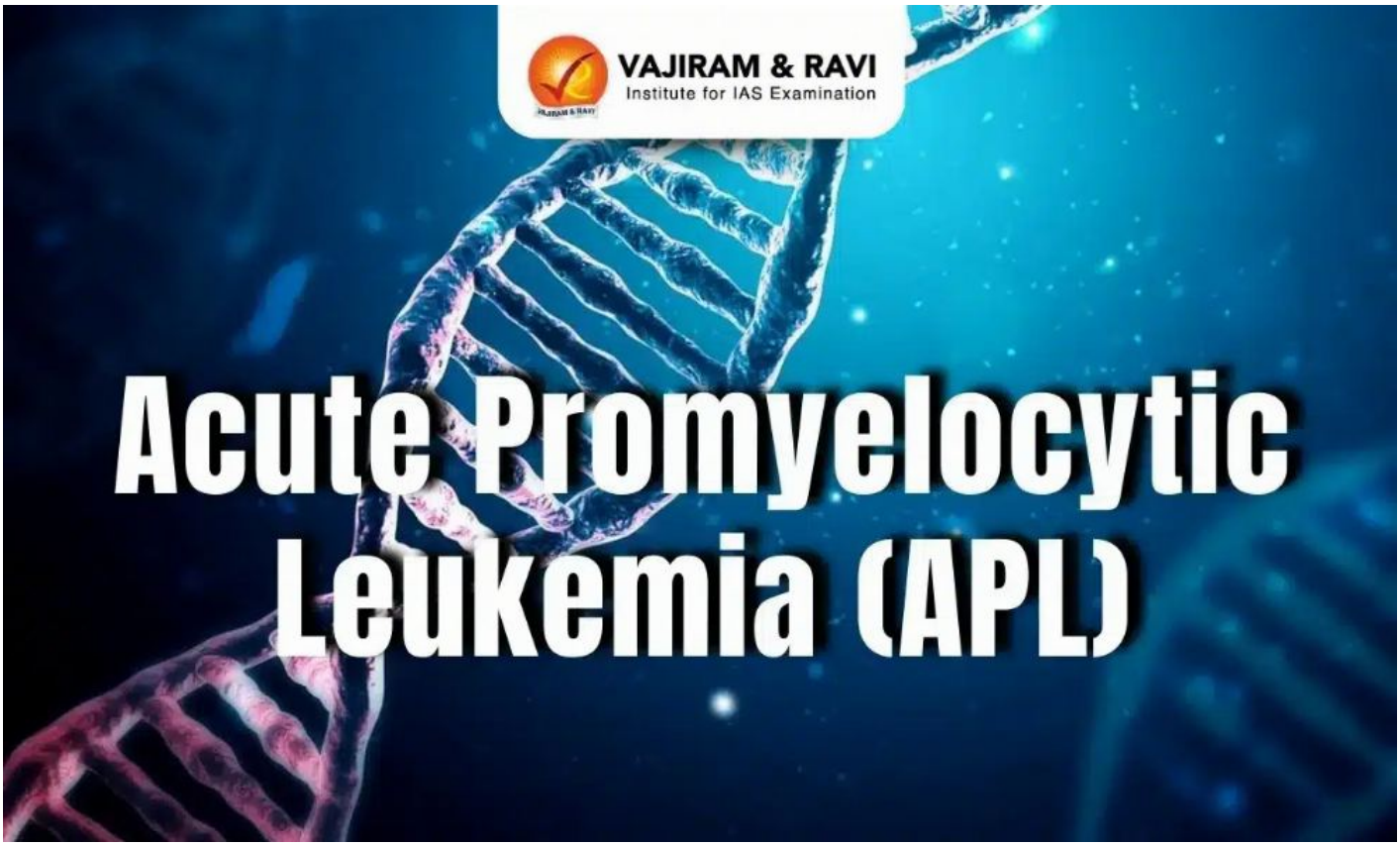

Acute Promyelocytic Leukemia (APL) Latest News

CRISPR-Based Test for Rapid Diagnosis of Rare Blood Cancer: APL

What is Acute Promyelocytic Leukemia (APL)?

- **Acute Promyelocytic Leukemia (APL)** is a **rare but aggressive form of leukemia**, a cancer affecting **blood cells**.
- APL is a **subtype of Acute Myeloid Leukemia (AML)** and contributes to approximately **10-15% of newly diagnosed AML cases**.
- The condition arises due to a **genetic mutation** where two genes—**PML and RARA—fuse together abnormally**, disrupting normal blood cell formation.
- This fusion leads to a significant **drop in white blood cells and platelets**, impairing the body's ability to **fight infections** and **control bleeding**.
- APL is particularly dangerous because it can cause **sudden internal bleeding in vital organs** like the **lungs** and **brain**, which can be **fatal within days** if left untreated.

- **Early diagnosis and treatment**, however, can **cure most patients**, making **timely detection crucial**.

Symptoms and Diagnosis

- The **median age** of diagnosis in India is **34 years**, with a **male-to-female ratio of 1.5:1**.
- Common symptoms include:
    - **Sudden bleeding** from gums and nose
    - **Fatigue**
    - **Unexplained fever**
    - **Bone pain**
- Although these symptoms may resemble other illnesses, **histopathological parameters** such as **complete blood count (CBC)** and **cell morphology** are essential for **definitive diagnosis**.

Acute Promyelocytic Leukemia (APL) FAQs

Q1. What is Acute Promyelocytic Leukemia (APL)?

Ans. APL is a rare subtype of acute myeloid leukemia (AML), characterized by abnormal white blood cell formation.

Q2. What causes APL?

Ans. A specific chromosomal translocation t(15;17) involving the PML-RARA gene fusion.

Q3. What is unique about its treatment?

Ans. Unlike other leukemias, APL responds well to all-trans retinoic acid (ATRA) and arsenic trioxide, achieving high cure rates.

Q4. What are the main symptoms?

Ans. Symptoms include fatigue, bleeding, and increased infections, often due to reduced normal blood cells.

Source: TH

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