

21– 11 – 2024

News: Sickle Cell Anemia

- Recently, on Janjatiya Gaurav Diwas (15th November 2024), a commemorative postage stamp on "Sickle Cell Eradication - 2047" was unveiled in Madhya Pradesh.

Sickle Cell Disease (SCD)

- Sickle Cell Disease (SCD) is a **group of inherited red blood cell (RBC) disorders.**
- **RBCs contain hemoglobin, a protein that carries oxygen and healthy RBCs are round. In SCD, the hemoglobin is abnormal, which causes the RBCs to become hard and sticky and look like a C-shaped farm tool called a sickle.**

Symptoms

- **Symptoms of sickle cell disease can vary,** but some common symptoms include:
- **Chronic Anaemia:** leading to **fatigue, weakness, and paleness.**
- **Painful episodes (also known as sickle cell crisis):** these can cause **sudden and intense pain in the bones, chest, back, arms, and legs.**
- **Delayed growth and puberty.**

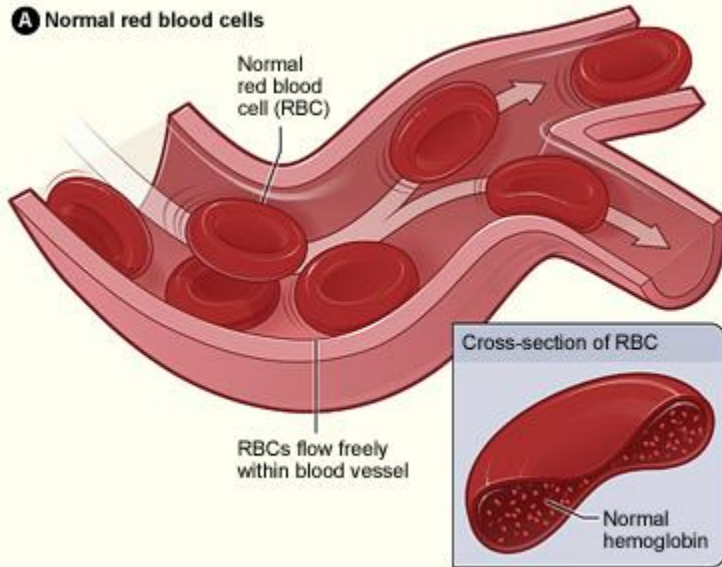
Treatment

- **Blood Transfusions:** These can help relieve anemia and reduce the risk of pain crises.
- **Hydroxyurea:** This is a medication that can help reduce the frequency of painful episodes and prevent some of the long-term complications of the disease.
- It can also be treated by bone marrow or stem cell transplantation.

India specific scenario

- India has the world's highest tribal population density, with 67.8 million people (8.6%) as per the 2011 Census.
- MoHFW highlights SCD among the top ten health issues impacting tribal communities disproportionately.
- Limited diagnostic and treatment facilities in remote tribal areas and lack of knowledge among communities about genetic counseling and preventive measures.
- Long-term SCD management can be financially taxing due to medication costs, regular check-ups, and hospitalisations.
- Treatments like CRISPR cost USD 2-3 million, and finding bone marrow donors is challenging.

A Normal red blood cells



B Abnormal, sickled, red blood cells (sickle cells)

