Sickle cell disease

- Sickle cell disease is a group of disorders that affects hemoglobin, the molecule in red blood cells that delivers oxygen to cells throughout the body.
- People with this disorder have atypical hemoglobin molecules called hemoglobin S, which can distort red blood cells into a sickle, or crescent, shape.
- Signs and symptoms of sickle cell disease usually begin in early childhood.
- Characteristic features of this disorder include a low number of red blood cells (anemia), repeated infections, and periodic episodes of pain.
- The severity of symptoms varies from person to person.
- Some people have mild symptoms, while others are frequently hospitalized for more serious complications.
- The signs and symptoms of sickle cell disease are caused by the sickling of red blood cells.
- When red blood cells sickle, they break down prematurely, which can lead to anemia.
- Anemia can cause shortness of breath, fatigue, and delayed growth and development in children.
- The rapid breakdown of red blood cells may also cause yellowing of the eyes and skin, which are signs of jaundice.
- Painful episodes can occur when sickled red blood cells, which are stiff and inflexible, get stuck in small blood vessels.
- These episodes deprive tissues and organs of oxygen-rich blood and can lead to organ damage, especially in the lungs, kidneys, spleen, and brain.
- A particularly serious complication of sickle cell disease is high blood pressure in the blood vessels that supply the lungs (pulmonary hypertension).
- Pulmonary hypertension occurs in about one-third of adults with sickle cell disease and can lead to heart failure.
- Sickle cell disease (SCD) which is the most prevalent inherited blood disorder, is widespread amongst many tribal population groups in India, posing a considerable health burden in several states.