

2. Commercial Cord Blood Banking

Prelims Syllabus: Governance - Policies & Schemes

Mains Syllabus: GS-II Issues relating to development and management of Social Sector or Services relating to Health, Education, Human Resources.

Why in News?

- Poona Citizen Doctor Forum (PCDF), a body that aims to rebuild trust among citizens and doctors, and promote ethical rational medical practice, has come forward to bust the aggressively promoted concept of cord blood banking

Highlights:

- The leading gynaecologist and activist Dr. Arun Gadre has warned to-be parents against falling prey to the emotional marketing tactics by stem cell banking companies.
- Over the past decade, stem cell banking has been aggressively marketed even as its use is still in experimental stages.
- But these companies charge enormous fees from parents to preserve cells, adding it is merely by emotional marketing that companies convince parents to bank the cells for several years promising future therapeutic use.
- Cord blood banking involves taking the umbilical cord blood, which is a rich source of stem cells, and preserving it for future use.
- Private companies who have forayed into this field offer packages anywhere between ₹50,000 and ₹1 lakhs to store and preserve the cells in right conditions.

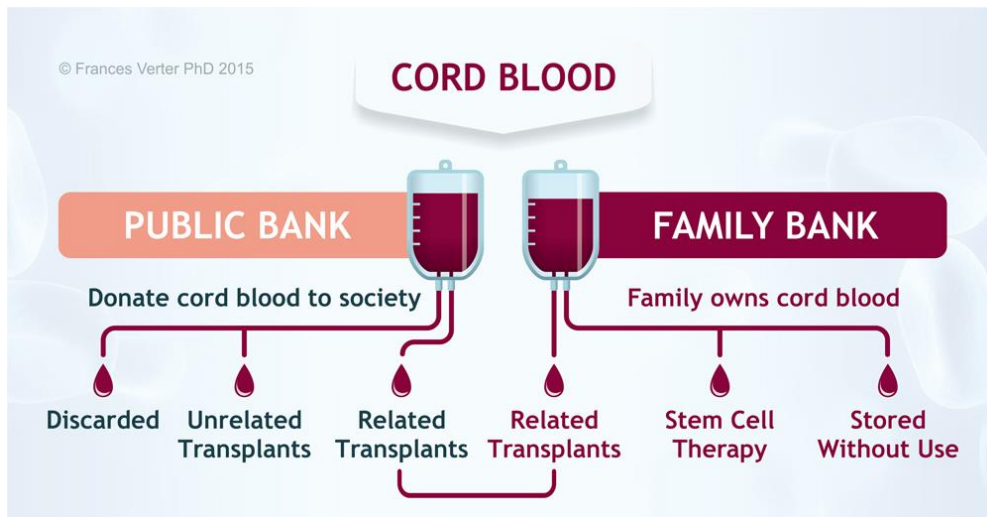
Views by ICMR:

- However, the Indian Council of Medical Research (ICMR) does not recommend commercial stem cell banking.
- It says so far there is no scientific basis for preservation of cord blood for future self-use and this practice therefore raises ethical and social concerns.
- Private storage of the cord blood is advisable when there is an elder child in the family with a condition treatable with these cells and the mother is expecting the next baby.
- In other situations, parents should be educated about the limitations of banking at this point of time.

Concerns:

- Despite such guidelines, a nexus of doctors and stem cell banking companies thrives and these companies get access to data of to-be parents.

- Activists say stem cell banking companies start approaching their prospective customers much before the delivery and offer competitive packages.
- Cord Blood banking:
- Globally, cord blood banking is recommended as a source of hematopoietic stem cell (derived from bone marrow, peripheral blood, or umbilical cord blood) transplantation for hematological cancers and disorders where its use is recommended.



- For all other conditions, the use of cord blood as a source of stem cells is not yet established.

Cord Blood:

- Cord blood is the blood from the baby that is left in the umbilical cord and placenta after birth.
- It contains special cells called hematopoietic stem cells that can be used to treat some types of diseases.

Hematopoietic Stem Cells:

- Most cells can make copies only of themselves. For example, a skin cell only can make another skin cell.
- Hematopoietic stem cells, however, can mature into different types of blood cells in the body.
- Hematopoietic stem cells also are found in blood and bone marrow in adults and children.
- Hematopoietic stem cells can be used to treat more than 70 types of diseases, including diseases of the immune system, genetic disorders, neurologic disorders, and some forms of cancer, including Leukemia and Lymphoma.

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- For some of these diseases, stem cells are the primary treatment. For others, treatment with stem cells may be used when other treatments have not worked or in experimental research programs.

Stem Cells:

- Stem cells are cells that can differentiate into other types of cells, and can also divide in self-renewal to produce more of the same type of stem cells.

Indian Council of Medical Research:

- The ICMR is the apex body in India for the formulation, coordination and promotion of biomedical research, and is one of the oldest and largest medical research bodies in the world.
- The ICMR is funded by the Government of India through the Department of Health Research, Ministry of Health and Family Welfare.

