

MENSTRUAL BLOOD BANKING



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INTRODUCTION:

Menstrual blood released by female every month is being discarded as the unhygienic waste but, does anyone know that the menstrual blood is the bank of self renewing stem cell that multiply in haste? Yes, this is true that this discarded unhygienic waste contains a large amount of self-renewing that can making a distancing into various body cells which reveals a great prospective for the cell therapy.

Now, a days some studies was founded that stem cells are present in the menstrual blood - along with cells from babies' umbilical cords - could potentially be incorporated into treatments for stroke, Alzheimer's disease and Lou Gehrig's disease, or amyotrophic lateral sclerosis, kind of puts a different spin on things.

CORD BLOOD SUPPLY:

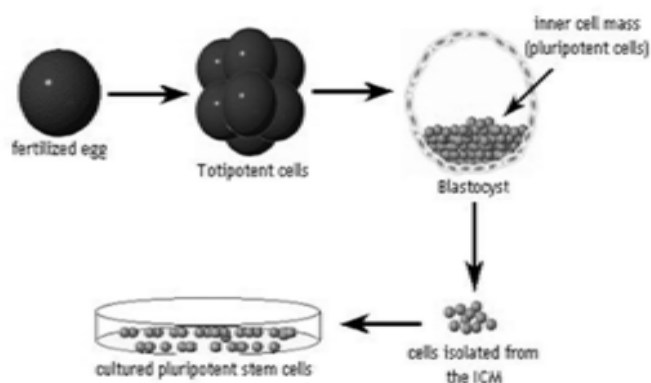
It apparently menstrual blood contains stem cells that have the ability to morph into various kinds of other cells. Because they are immunologically immature in a transplant, and they are able to contribute to cell survival, according to neuroscience researchers from the University of South Florida and three private-sector research groups, Saneron CCEL Therapeutics find out that the cord blood also having the stem cell.

STEM CELLS :

DEFINITION: A cell that has the ability to continuously divide and differentiate (develop) into various other kind(s) of cells/tissues.

CHARACTERISTICS:

- 'Blank cells' (unspecialized)
- Capable of dividing and renewing themselves for long periods of time (proliferation and renewal)
- Have the potential to give rise to specialized cell types [differentiation]



STEM CELLS COUNT FROM TWO MAIN SOURCES:

1. Embryos
2. Adult tissues .

Embryonic stem cell can give rise to virtually any cell type in the body, but they are controversial because conventional procedures for obtaining them involve the destruction of an embryo.

Adults stem cell, such as those found in bone marrow, do not pose the same ethical concerns, but they have limited powers and collecting them can require invasive procedures.

Menstrual stem cell could turn out to be the happy medium between embryonic and adult stem cells, providing an ethically acceptable alternative that is readily accessible and appears to give rise to most of the major tissue types in the body.

Menstrual blood banking is a process of banking of menstrual blood for the purpose of cell therapy.

Menstrual Blood Bank Started In India:

Life Cell brings Menstrual Blood Stem Cell Banking to India

Life Cell is the first and only company offering menstrual blood stem cell banking in India



Life Cell International, pioneers in stem cell banking, recently launched Life Cell Femme- Menstrual blood stem cell banking service in India. Actress and model Lisa Ray unveiled this innovative service at the launch function at Mumbai.

Life Cell is the first and only company offering menstrual blood stem cell banking in India and the launch of this break-through technology reinstates Life Cell's pioneering and leadership positioning in the industry. Menstrual blood banking has been pioneered by Cryo-Cell International, US who are the technology partners of Life Cell and have been offering this service in other countries under the brand C'elle.

This concept was started in the year 2007 by an American based company Cryo cell and in India ,it was started by life cell international on march 8,2011 by film actress Lisa Ray, who won the battle with cancer and recovered from deadly disease.

STEM CELL USEFUL:

Every month of during a women's menstrual period

the uterine lining endometrium is shed along with the extra blood and tissues. This lining of the uterus contains large number of mesenchymal stem cells and several thousand fold high concentration of stem cells growth factors. These cells from the endometrium are unique because they have many properties and characteristics similar to both bone marrow and embryonic stem cell.

The stem cell multiply rapidly and can grow into other types of cells and develop into neutral, cardiac, cartilage tissues as well as fat and bone.

The stem cell in the menstrual blood has a success rate 100 times higher than the 0.2-0.3% for stem cell taken from human bone marrow.

MESENCHYMAL CELL THERAPY:

It treats diseases of non –hematopoietic tissue in an analogous fashion and leukemia with hematopoietic stem cell transplantation.

FUTURE GOALS: 1.Alzheimer's disease., 2.Atherosclerosis, 3.Diabetes mellitus, 4.Heart disease, 5.Inflammatory bowel disease, 6.Parkinson's disease, 7.Osteoarthritis, 8.Rheumatoid arthritis.

ADVANTAGES OF MENSTRUAL BLOOD BANKING:

- ❖ Higher potential compared to similar cells from the bone marrow .
- ❖ Higher proliferative properties allow multiplying for longer duration without damages to DNA and hence larger number can be obtained.
- ❖ Multiple dosages-obtain unlimited numbers of purified mesenchymal stem cells for therapeutic use for more than once.
- ❖ Pain less and harm less
- ❖ Simple , easy and convenient method of collection.
- ❖ High patient safety.
- ❖ No complications, toxicity, adverse effect.
- ❖ Less preservation rates

- ❖ Non invasive procedure.
- ❖ Reduce the problem of immune rejection.

Collection Process of Menstrual Blood:

- ✓ The women are sent a discreet collection kit comprising of menstrual cup, collection tubes etc.
- ✓ The collection can be done in the privacy and convenience of home using the menstrual cup.
- ✓ A conical cup made of medical grade silicon is inserted into the vagina, much as a tampon on a women's heaviest flow of day.
- ✓ The cup remains in place for up to three hours, collecting between 10 to 20 ml of blood. Which is poured into a container in a collection kit.

STORAGE OF MENSTRUAL BLOOD:

After processing, the stem cells are harvested and menstrual stem cells are frozen in liquid nitrogen storage. Container for cryogenic preservation at subzero [-1960C]

This procedure will enable the stem cells to retain its potency and viability for indefinite period of time.

BANKING COST:

Preservation price starts at Rs 29,900 and annual storage is Rs. 1,500 for every subsequent year for as many years as desired to preserve client's menstrual blood stem cells.

CONCLUSION:

"Menstrual blood bank offers hope of new cure"

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