

Knowledge on collection and storage of cord blood banking.

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Introduction:

● Cord blood is collected from the infant's umbilical cord after delivery.

● This method poses no risk to the mother or infant. Most often the cells are discarded with the umbilical cord as biohazard waste. The first successful cord cell transplant from umbilical cord blood was accomplished in 1988. Since then the potential use of cord blood has grown. Umbilical cord blood contains hematopoietic stem cells that are very different from other types of cells in the body. These special stem cells have the ability to divide and renew themselves for long periods and have the ability to differentiate into all the cells of the body (National institute of health, 2009).

These stem cells can be used to treat malignant diseases such as acute lymphocytic leukemia, chronic myelogenous leukemia, myelodysplastic syndrome and neuroblastoma.

Cord blood can also be used to treat a variety of non malignant diseases including

Fanconi's anemia, hunter syndrome, hurler syndrome, idiopathic aplastic anemia, thalassemia, and even osteoporosis. These hematopoietic progenitor cells have the potential to develop into a variety of human cells. (Gluckman2009) Umbilical cord blood has been shown to have ten times the amount of hematopoietic stem cells compared to bone marrow. (Gunning 2005) Not only is it faster and easier to find a tissue match through cord blood, the risk of the recipient's body rejecting the donation is less than traditional bone marrow transplant.

The potential benefits of umbilical cord blood are hindered by the lack of knowledge among pregnant women.

A study conducted on Knowledge and attitude of pregnant women with regard to collection, testing and banking cord blood stem cells in North America among 443 antenatal mothers.70% of them reported poor or very poor knowledge about Cord Blood Banking, 68% wanted to receive information about Cord Blood Banking

from Health Professionals and 70% wanted from Prenatal Classes.

Though there are many benefits of cord blood these fascinating stem cells are continued to be discarded as a medical waste even today due to the lack of Knowledge. It is the responsibility of the health professionals to create awareness about Cord Blood Banking and to motivate its utilization by general public to move towards this bio health insurance.

Hence the investigator has decided to undertake this study on antenatal mothers in order to sensitize them to preserve their baby's Cord Blood to ensure the health of their baby and thereby the health of the nation.

Objectives:

1. To assess the knowledge of antenatal mothers regarding collection and storage of cord blood banking.
2. To find an association between knowledge score and the selected demographic variables of antenatal mothers regarding collection and storage of cord blood banking.

Materials and methods:

Research Design

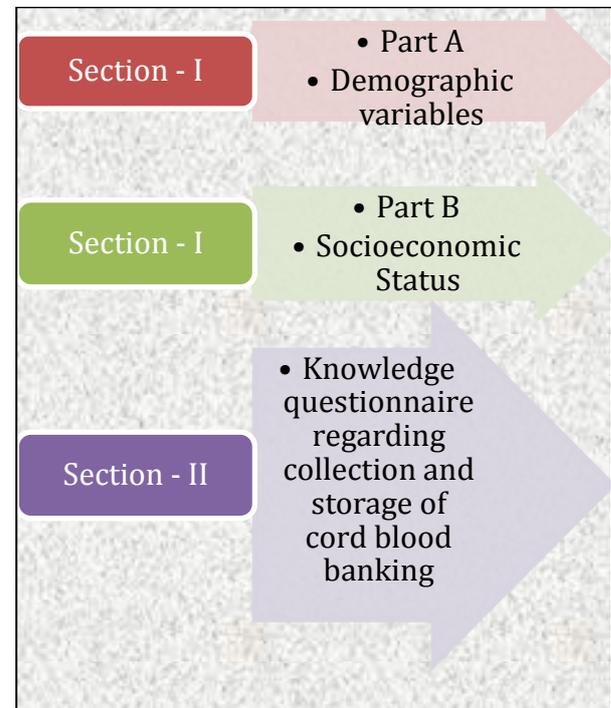
An exploratory descriptive research design was used for the study.

Sample Size The sample consisted of 100 antenatal mothers attending antenatal OPD at vanivilas hospital in Bangalore.

Sampling Technique

A non probability Purposive sampling technique was used to select the samples. Informed consent was obtained from the participants

Tools and techniques:



The tool consisted of

Section- I which includes

Part-A.

Demographic variables such as age, religion, obstetric score, place of living, Type of family

Part-B.

Socioeconomic Status of the antenatal mothers such as education, occupation, income, newspaper subscription, magazine subscription, and membership in any of the organization.

Section-II

Consists of knowledge questionnaire regarding collection and storage of cord blood banking. Each question carries one mark the total score was 15. It was categorized into Poor (1-5), Average (6-10) and Good (11-15).

Result and Findings:

In this study, most of the antenatal mothers had poor knowledge score (95%) regarding collection and storage of cord blood banking. These findings were supported by Suen SS, Lao TT, and Chan OK et.al. (2011) conducted a study on maternal understanding of commercial cord blood storage for their offspring. 2000 women were recruited for this study. 78.2% of them had no idea that there was the chance of using cord blood stem cells. The results of this study revealed inadequate knowledge on cord blood banking and its applications among most of the pregnant women.

In this study there was a significant association between the knowledge score and the selected demographic variables such as live birth, abortion, death, place of living, type of family, and membership in any of the organization. Other variables such as age, religion, gravid, para, education, occupation, income, newspaper subscription and magazine subscription were not showing any association with the knowledge score. These findings were

supported by Perlow JH (2006) .He conducted a study on patients' knowledge of umbilical cord blood banking. Four hundred twenty-five patients completed the survey; 37% had no knowledge of cord blood banking. Older patients and those with higher degrees of education were more aware of cord blood banking, and the greatest disparity of knowledge was noted among Native American patients ($p < 0.001$). So the knowledge is depends on their age and education.

Conclusion:

Umbilical cord blood was once thought of as a waste product. Now, years after the first successful umbilical cord blood transplant, more families seek information about whether or not to save their newborn's cord blood. Childbirth educators may be one of the main sources that an expectant family depends on to gain more knowledge about cord blood banking in order to make an informed decision. Preserving umbilical cord blood in public banks is advisable for any family; however, it is recommended that expectant families only consider private cord blood banking when they have a relative with a known disorder that is treatable by stem cell transplants.

Those giving ante and perinatal care need to offer accurate and scientific counseling services on this subject to parent who need to be informed.

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