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Knowledge and Attitude on Umbilical Cord Blood Banking Among Antenatal Mother

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Abstract

Umbilical cord is the vital direct interlink between mother and fetus which is always depicted as the relationship of an emotional bonding of motherhood which is a beautiful experience for a women. When mother gives birth the blood remains in the placenta and umbilical cord is referred as cord blood. Cord blood is the blood which remains in the umbilical cord and placenta post-delivery. Cord blood banking is the process of collecting the cord blood and extracting and cryogenically freezing its stem cells and other cells of the immune system for potential future medical use. Cord blood banking is a once in a life time opportunity to save our baby and the cord blood stem cells for potential medical uses like malignancies, bone marrow failure disorders, inherited metabolic and immunological disorder. A community based descriptive survey design study was conducted to assess the level of knowledge and attitude regarding umbilical cord blood banking among antenatal mothers.

Materials and methods: The research approach used for this study was quantitative research approach and descriptive cross sectional survey design was adopted. By using purposive sampling technique 100 subjects were selected from primary health centre during antenatal clinic. Out of 100 subjects, 63 (63%) had inadequate level of knowledge and 66 (66%) of the subjects had positive level of attitude. There was a positive correlation between knowledge and attitude between the subjects towards umbilical cord blood banking. There was statistically significant association ($p< 0.005$ level). between the knowledge and attitude with selected demographic variables as type of family, monthly income, previous knowledge on umbilical cord blood banking.

Conclusion: It was evident that antenatal mothers had positive attitude towards umbilical cord blood banking and inadequate knowledge about the umbilical cord blood banking. After data collection with ,the information booklet, the researcher created awareness to all the antenatal mothers and motivated to do the umbilical cord blood banking for the welfare of their children and they got positive feedback as most of the mothers registered for cord blood banking. This study enlightens the knowledge of the parents about umbilical cord blood banking and generate a strong voice for the children future all around the world.

Keywords: Umbilical cord blood banking; Antenatal mothers.

Introduction

Cells are the basic building blocks of living things. The human body is composed of trillions of cells, all with their own specialised function. The complexity of the human body consists hundreds of different types of cells. Thehuman cell types are Bone cells as three primary types of bone cell. Osteoclasts, which dissolvebone. Osteoblasts, which form new bone. Osteocytes, which are surrounded by bone and help,communicate with other bone cells. Types of blood cell as Red blood cells, which carry oxygenaround the body. White blood cells, which are part of the immune system. Platelets, which helpblood clot to prevent blood loss after injury. Muscle cells are also called myocytes, muscle cellsare long, tubular cells.

Stem cells are the basic foundation cells of every organ tissue in our bodies. They remain in the tissues and organs of our body right from inception embryo, embryonic stem cells, thought foetal life in prenatal tissues and after birth into the adult life. Stem cells are found in multi cellular organism. The two broad types of mammalian stem cells are embryonic stem cells and Adult stem cells.Umbilical cord is the vital direct interlink between mother and fetes which is always depicted asthe relationship of an emotional bonding of motherhood which is a beautiful experience for awomen. When mother gives birth the blood remains in the placenta and umbilical cord isreferred as cord blood. Cord blood banking is a once in a life time opportunity to save your baby cord blood stem cells for potential medical uses like malignancies, bone marrow failure disordersinherited metabolic and immunological disorder

Cord blood is the blood which remains in the umbilical cord and placenta post-delivery. Cord blood banking is the process of collecting the cord blood,extracting and cryogenically freezing its stem cells and other cells of the immune system for potential future medical use to save the life of the children. In 1990s the umbilical cord and its blood were considered as medical waste. Today, parents play major role in banking or store their baby's umbilical cord blood because the stem cells protect their children in the treatment of life-threatening and debilitating disease.

Cord blood is beneficial for the treatment of nearly 80 disease which is approved by the FDA and this treatments have been performed more than 35,000 times around the world to treat cancers (including lymphoma and leukaemia), anaemia, inherited metabolic disorders and some solid tumours and orthopaedic repair. Cord blood which is taken from a baby's umbilical cord is always a perfect match for the baby. Immediate family members are more likely to also be a match for the stored cord blood. In addition, siblings have a 25% chance of being a perfect match and a 50% chance of being a partial match. Parents, who each provide half the markers used in matching, have a 100% chance of being a partial match. Even aunts, uncles, grand parents and other extended family members have a higher chance of being a match and could possibly benefit from the banked cord blood. So, the Researchers have keen interest in doing the study as to assess the level of knowledge and attitude regarding umbilical cord blood banking among antenatal mothers and create awareness by distributing information booklet and promote the health of the future citizens.

Statement of the Problem

A study to assess the level of knowledge and attitude on umbilical cord blood banking among antenatal mothers attending antenatal clinic in selected Primary Health Centres, Puducherry.

Objectives

1. To assess the level of knowledge on umbilical cord blood banking among antenatal mothers.
2. To assess the level of attitude towards umbilical cord blood banking among antenatal mothers.
3. To find out the correlation between the level of knowledge and attitude regarding umbilical cord blood banking
4. To find out the association between the level of knowledge and attitude regarding umbilical cord blood banking.
5. To create awareness by distributing information booklet on umbilical cord blood banking among antenatal mothers.

Materials and Methods

A descriptive research design was adopted for this study. The study was conducted in selected primary health centre as PHC, Lawspet and PHC, Koodapaakam areas during antenatal clinic, Puducherry. Totally, 100 samples were selected by using purposive sampling technique. After self-introduction the purpose of the study was

explained to the subject and got their willingness and cooperation to participate in this study. The demographic data was collected by using interview method and the level of knowledge and the attitude towards umbilical cord blood banking was assessed from the subjects with the help of 20 self administered knowledge related questionnaires and 10 attitude questionnaire.It took 15-20 minutes to collect the data from each subject. Each subjects give their positive feedback and received information booklet on umbilical cord blood banking.

Results and Discussion

The demographic data reveals that out of 100 subjects, 44% of them were in the age group of between 21-25 years, among 100 subjects, 85% of them were Hindus. 41% of the subjects' educational status was high school level. Most of them were (94%) were house wives, 56% of the subjects were earning monthly income as below Rs.10,000 and 48% of them were in joint-family. Regarding their level of knowledge,6% of them had previous experience of umbilical cord blood banking. 63% had inadequate level of knowledge and 31% had moderately adequate level of knowledge. Regarding their attitude, 66% of them had positive attitude. towards umbilical cord blood banking. There was a positive correlation between knowledge and attitude between the subjects towards umbilical cord blood banking There was a statistically significant association (p > 0.005) level between the level of knowledge and attitude with selected demographic variables as type of family, monthly income, previous knowledge about umbilical cord blood banking.

Table 1: Percentage wise distribution oflevel of knowledge on umbilical cord blood banking among the subjects. N=100

S. No.	Variables	Frequency (N)	Percentage (%)
1	Inadequate Knowledge	63	63
2	Moderately adequate Knowledge	31	31
3	Adequate Knowledge	06	06

Table 1: showed that out of 100 subjects, 63% of them had inadequate level of knowledge, 31% of them were moderately adequate level of knowledge and 6% of them only aware about umbilical cord blood stem cells respectively.

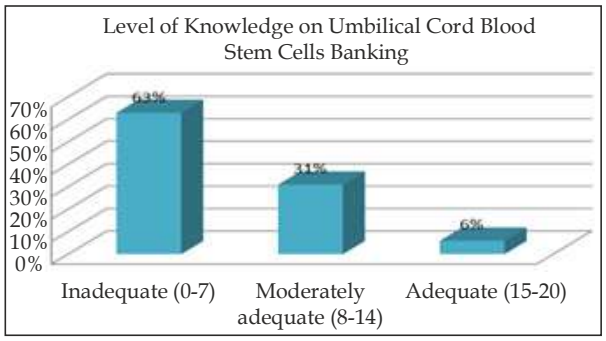

Table 2: Percentage wise distribution ofattitude on umbilical cord blood banking among the subjects. N=100

S. No.	Variables	Frequency (N)	Percentage (%)
1	Positive Attitude	66	66
2	Negative Attitude	34	34

Table 2 showed that out of 100 subjects, 66% of the subjects had positive attitude towards umbilical cord blood banking and 34% had negative attitude due to ignorance.

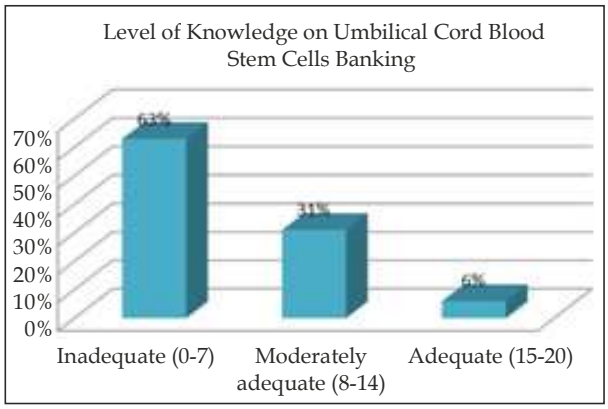

Table 3: Correlation between the level of knowledge and attitude on umbilical cord blood banking among the subjects. (N=100)

Variables	Mean	Standard Deviaton	'r' Value	'p' Value
Knowledge	7.06	3.964	0.473	0.001**
Attitude	33.16	4.854		

**-p < 0.001 highly significant

Table 3: showed that there is positive correlation between knowledge and attitude towards umbilical cord blood banking. It was evident that there was significant relationship between knowledge and attitude of the subjects on umbilical cord blood banking.

Conclusion

On the basis of findings, the present study illuminates that the level of knowledge regarding

umbilical cord blood banking and importance of cord blood cell among antenatal mothers need to be addressed right from the antenatal period itself and antenatal mothers were considered as vulnerable group. This study will enlighten the knowledge on umbilical cord blood banking and help them as well their children throughout their life time till they reach their another generation.

It is highly significant to create awareness and educates the antenatal mothers about the umbilical cord blood banking in the form of formal education and distributing information booklet during antenatal clinic in PHC as well as mass media. This study indicates need of health educational activities among antenatal mothers, future parents as adolescent girls and family members. So Nursing professionals are in a key position and guide the antenatal mothers via pamphlets health talk on umbilical cord blood banking. The Government play a major role in creating awareness about umbilical cord blood banking and prepare policy among the stakeholders to protect the children from the communicable and non communicable diseases. Media plays major role in creating an awareness and importance of cord blood banking in women especially during antenatal period. Thus we can generate a strong voice for women all around the world and prevent the children from communicable and non communicable diseases.

Recommendation

- A study may be conducted on large sample for wider generalization
- A comparative study may be conducted in urban and rural area.
- An exploratory study can be done to access the knowledge and attitude of antenatal mother regarding umbilical cord blood banking.

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