

## THE STEPS OF IMPLEMENTATION UMBILICAL CORD BLOOD BANKING IN THE WORLD

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**Actuality.** Umbilical cord blood banking (UCBB) consists of collecting and storing blood from umbilical cord for allogeneic or autologous transplantation. Currently, there are several approved therapeutic applications of Umbilical cord blood (UCB) and a considerable amount of ongoing research projects and clinical trials in several fields. Revisiting the history of UCBB appears as a source of inspiration for the future.

**Aim of the research.** To summarize the history of UCBB as well as the mythological and historical concepts that paved the way to its development

**Methods and materials.** A review of the literature was conducted. UCBB is linked to mythology in the frame of regenerative medicine. Such concepts appear in Greek and Hindu mythology as well as Romantic literature. Historically the works of Christian H. Pander and Rudolf Virchow on tissue regeneration have been associated with the formulation of the UCBB concept. UCBB was initiated in 1983 when Dr. Hal Broxmayer and his colleagues suggested the use of the umbilical cord as a viable alternative to bone marrow as a source for Hematopoietic Stem Cells. In 1992, the New York Blood Center established the first public bank for umbilical cord blood and in 1996 an FDA approval was obtained for further research on therapeutic applications of UCB.

**Results.** As the results of the sociological survey in the Prenatal Center of Poltava city in 2019 showed, only 40 % of surveyed pregnant women had a positive attitude to cell therapy but only 0.7 % of respondents were going to sign a treaty on cord blood storage with the UCBB after childbirth. According to the results of the survey, the cost of services of cord blood cryostorage is too high for 94.1 % of surveyed pregnant women, the other 5.7 % of respondents noted that they did not trust cord blood banks.

**Conclusions.** It is believed that in 2022 every country will have an Umbilical Cord Blood Bank. Educating physicians and counseling patients are considered as the major challenges that UCBB faces nowadays. Moreover, there is considerable debate as far as public and private UCBB is concerned. In the future attention will be paid to educating a voluntary spirit of donation, similar to the one of blood or bone marrow donation as well as mapping potential donors, and applying the principles of precision medicine to UCBB.

## THE LEVEL OF COMPLIANCE IN CHILDREN WITH DIABETES MELLITUS I TYPE

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**Actuality.** Compliance is the extent to which a patient's behavior matches the prescriber's advice. Compliance is important for the treatment of chronic diseases. Lack of compliance is a serious problem which not only affects the patient but also the health care system. Medication non compliance in patients leads to substantial worsening of disease and death. Studies reveal that patients with chronic illnesses take only ~50% of medications prescribed for those conditions. According to literature reports adherence rates are typically higher among patients with acute conditions, as compared against those with chronic conditions.

**The aim of the research.** Was to determinethe level of compliance in children with diabetes mellitus I type (DM).

**Methods and materials.** The 55 children from 6-17 years were observed. The inspected children were divided into groups: 1 group (1gr) - 30 children with the DM (average age – 12.5±2.7; boys-60 %; girls – 40 %) and control group (2gr) – 25 children without chronic pathology (average age – 11.6±3.5; boys – 56 %; girls – 44 %). All children were examined with a questionnaire-based study. The questionnaire is represented by four components: social, emotional, behavioral and total compliance. Statistical analyses were performed with a statistic package "Microsoft Excel".

**Results.** When we analyzed the level of compliance in patients with DM it was revealed that they had an average level of social, behavioral and emotional compliance indicating that such patients are characterized by an uncertain behavioral position. They are prudent, cautious, reasonable, inclined, prone to concern, anxiety about the future, pessimistic about the results of treatment. Not always ready to take the risk associated with the treatment of his disease, as they are not sure of a positive result. The presence of a high level of total compliance indicates the presence of a chronic disease and a responsible attitude to one's health. The level of compliance depends on the sex, time of duration disease. Patients of 2 gr had an average level of behavioral and social compliance, indicating that such patients are characterized by an undefined behavioral position. They are reasonable, careful, concern about the future, pessimistic about the results of treatment. They are characterized by an uncertain social position. The total level of compliance is the average, which is characterized by a tendency to concern, concern about the future. They do not seek to comply strictly treatment, as they constantly doubt its necessity.

**Conclusions.** Patients with DM have a higher level of total compliance than patients of the control group that indicates about more responsible attitude them to their health.

## THE STATE OF THE AUTONOMIC NERVOUS SYSTEM IN CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS

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