

Umbilical cord blood was once thought of as a waste product, but now its importance after the first successful transplant is known. Preserving the umbilical cord blood in public banks is advisable for families. Stem cell transplants have been recommended to treat cancers, blood disorders, congenital metabolic disorders, immunodeficiency and some nonmalignant hematologic disorders. There are several advantages of using umbilical cord blood stem cells over bone marrow stem cells for transplants. These advantages include ease of collection, no risk to mother or child, less time needed for processing (more quickly available for use), less costly than bone marrow collection, less risk for transmission of infection, less need for stringent antigen typing, and less chance of rejection. Despite the benefits of using umbilical cord blood stem cells for transplant, the process also has some disadvantages. The disadvantages include slow engraftment, limited cell dose, small volume of units, additional cell doses being unavailable, autologous donation may have limited benefit owing to hereditary disorders, storage issues, unknown length of long-term storage, the cost related to long-term storage, and finally quality control. The chance that a child would be able to use his or her own cord blood is extremely low: from a 1:400 to a 1:200,000 chance over the child's lifetime. The experts do not recommend private cord blood banking. Some ethical concerns over umbilical cord blood banking warrant mention. Saving the cord blood in public banks is a worthy undertaking for some families. Physicians or other professionals who recruit pregnant women and their families for for-profit umbilical cord blood banking should disclose any financial interests or other potential conflicts of interest. Disclosure may include information regarding maternal infectious disease and genetic testing results as well as the privacy of donor's demographic data. Umbilical cord blood transplantation has been known as a viable source of hematopoietic stem cells for patients with malignant and non malignant hematopoietic disorders. Banking of umbilical cord blood units gives a chance to patients who do not have a HLA matched sibling or unrelated stem cell donor to find a ready hematopoietic stem cells source in a short time but large spaces needed for storage, cost and the long term viability reduces its importance in stem cell therapy.

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