Comparing 2 types of blood and marrow transplant (BMT): Double cord blood and haplo-cord

What were researchers trying to learn?

Researchers looked at 2 types of BMT to see if one worked better than the other. They compared:

1. **Double cord blood transplant** – Transplant using 2 cord blood units. A single cord blood unit has blood-forming cells from 1 baby's umbilical cord. The blood is collected at birth and frozen until a patient needs it. Sometimes there aren't enough cells for a patient in 1 cord blood unit. So doctors give patients 2 cord blood units.
2. **Haplo-cord transplant** – Transplant using 1 cord blood unit and blood-forming cells from a half-matched (haplo-identical) donor. This is a donor who matches exactly half of the patient's HLA. HLA, human leukocyte antigens, are markers found on most cells in the body. Parents are always a half-match for their children and vice versa. Brothers and sisters have a 50% (1 out of 2) chance of being a half-match for each other.

The researchers compared results from 193 patients who had double cord blood transplants with 97 patients who had haplo-cord transplants. All of the patients were adults.

What did they find?

The researchers found that 1 year after transplant:

- About half (52%) of patients who had a double cord blood transplant were alive
- Half (50%) of patients who had a haplo-cord transplant were alive

In some ways, the patients who had a haplo-cord transplant did better. Fewer of these patients had their disease come back. And they had less graft-versus-host disease (GVHD). GVHD is a complication that happens because of differences between the donated cells (the graft) and the patient's cells (the host).

For these reasons, the researchers concluded that haplo-cord transplants have better results than double cord blood transplants.

Important Points:

- **For both types of transplant, about half of patients were alive 1 year after transplant.**
- **Patients who had a haplo-cord transplant had less GVHD, and the disease came back less often.**

Why is this important?

Doctors and patients can use these results to talk about which type of transplant might be best for them.

What else should I keep in mind about this study?

The results of research studies are always limited in what they can and can't tell you. In this study, patients getting a haplo-cord transplant had generally better results. But every patient is different, so there's no guarantee that this type of transplant is always the best choice. For example, it's possible that other factors, like the patient's age or disease, could affect how well transplant works.

Also, this study compared 2 specific types of transplant in adults. It doesn't tell us anything about other types of BMT or how well these 2 types of transplant work for children.

Questions to ask your doctor

If you're considering transplant, you may want to ask:

- Which is the best cell source (marrow, peripheral blood stem cells, or cord blood) for me?
- If a matched donor can't be found, what are my options?
- What are the risks and benefits of transplant using different cell sources or donors for me?

Learn more about

- This research study
- Blood and marrow transplant

Source:
van Besien K, Hari P, Zhang M-J, et al. Reduced-intensity haplo plus single cord transplant compared to double cord transplant: Improved engraftment and graft-versus-host disease-free, relapse-free survival. Haematologica. 2016 May 1; 101(5): 634-643. Epub 2016 Feb 11. PMC5004373.

About this research summary

Ground-breaking research into blood and marrow transplant is happening every day. That research is having a significant impact on the survival and quality of life of thousands of transplant patients. But the research is written by scientists for scientists. By providing research news in an easy-to-understand way, patients, caregivers, and families have access to useful information that can help them make treatment decisions. This information is provided on behalf of the Consumer Advocacy Committee of the CIBMTR® (Center for International Blood and Marrow Transplant Research®). The CIBMTR is a research collaboration between the National Marrow Donor Program®/Be The Match® and the Medical College of Wisconsin.

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