Cordlife HealthChat
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Hello, welcome to this week's healthchat. I'm Alexandra Ho.

With the promise of cure for a whole array of diseases, it's not hard to understand the excitement behind the advances in biomedical sciences.

Singapore's already gained the distinction of being the world's first to use cord blood transfusion to help cure a 5-year-old of his fatal blood disorder.

Cord blood's taken from the umbilical cord after the baby's born.

Singapore now has its first private cord blood collection and storage start-up, Cordlife.

It's founder, Steven Fang tells me the amazing potential of cord blood.

"You can use this hemotopoietic stem cells and apply it as part of a treatment that looks into areas of blood diseases, cancerous diseases, which typically today, you'll combat that with fairly toxic approach of treatment, for example, chemotherapy. With those kind of therapy, the patients' immune systems will be depressed for a period of time. And the only way to rebuild that is of course the use of hemotopoietic stem cells to rebuild the immune system."

Besides, there are about 60 other conditions, that could possibly benefit from the use of stem cells tranplants.

They include conditions like blood disorders, genetic disorders, malignancies and cancer.

Thus cord blood becomes a very attractive insurance policy to hedge against future diseases.

Mr Fang says a private storage bank has even more advantages.

"This is fully autologous, which means it is for that same individual. You will have little or no problem with matching, by that, I mean that the person's immune system or body, having to accept these stem cells. And of course, the plain simple fact that this is readily available for that individual."

Gathering cord blood is an easy and painless task.

But the process after that takes up much of the work, as Mr Fang explains.

"It is very similar to collecting blood, from an individual through his or her veins. The whole process is very safe, to both the mother and child. It does not risk mother or child and it doesn't introduce any significant additional steps. It would require the use of a syringe, to basically syringe out umbilical cord blood from one of the three veins of the umbilical cord that is attached to the placenta. Once that is syringed-out, we add anti-coagulant to make sure that the blood doesn't clot, afterwhich it is packed and shipped to a facility where it is processed under clean room conditions. Basically, it involve taking out parts that we know for sure are not stem cells. Selecting specific cells to identify the groups we think are stem cells, separating that out from the rest of the blood specimen. That is then processed further by way of purification, by way of ensuring that there's no contamination, by way of ensuring that there are no other infectious agents in that specimen, and preparing it for long term cryo-preservation, storing the blood within nitrogen at minus 196 degrees for an extended period of time."

Theoretically, cord blood can be stored for 18 years.

But with rapidly advancing technology, its shelf-life may extend further.

For now, Cordlife stores most of the blood in other parts of the world, such as the United States, Hong Kong and Japan.

But Mr Fang is looking into starting a processing and storage facility here by the end of the year.

That could help bring down the price of collection and processing cord blood.

For now, collecting the blood costs between 2 thousand 5 hundred and 4 thousand 5 hundred dollars, while an annual fee of 250 dollars is charged for storage.Cordlife envisions itself as the leading biotechnology service provider for cord blood technology and banking in Asia.

It's looking into other areas it can go into.

"We're also investing very heavily in stem cell expansion or amplification technology, because the hemotopoitic stem cells that yields from umbilical cord blood is so limited, it's sufficient for a one time treatment for a child. We want to basically invest in this technology to allow us to multiply and get additional stem cells, so that it can be applied to adults or it can be used in other areas of therapy. We are right now investing in identifying different sources of non-controversial stem cells, one such area are fat tissues. These are normally tissues collected through liposuction and subsequently thrown away, we'll like to invest in some R & D efforts to recover that can be used for a multitute of wound management as well as regenerative or replacement tissue therapy. One of the area we hope to go into is using stem cell for anti-cancer vaccine."

Thanks for being with me on this week's healthchat. For Newsradio 9-3-8, I'm Alexandra Ho.

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