

Limbs saved by menstrual blood stem cells

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Cells obtained from menstrual blood, termed 'endometrial regenerative cells' (ERCs) are capable of restoring blood flow in an animal model of advanced peripheral artery disease. A study published today in BioMed Central's open access Journal of Translational Medicine demonstrates that when circulation-blocked mice were treated with ERC injections, circulation and functionality were restored.

Critical limb ischemia, an advanced form of peripheral artery disease, causes approximately 150,000 amputations per year in the US. Currently there are no medical or surgical interventions that are effective in the advanced stages of the disease. ERCs are cells taken from menstrual blood that are capable of forming into at least 9 different tissue types, including heart, liver and lung. Their discovery won the 'Medicine Research Award of the Year' award for BioMed Central's Research Awards in 2007.

Dr. Michael Murphy, a vascular surgeon from Indiana University and lead author of this study has already performed clinical trials with adult stem cells for patients with peripheral artery disease. He stated, "The advantage of ERCs is that they can be used in an 'off the shelf' manner, meaning they can be delivered to the point of care, do not require matching, and are easily injectable without the need for complex equipment."

The experiments were performed as a collaboration between University of Western Ontario, Scripps Research Institute, Indiana University, and several other academic centers. The ERC cell population is currently

being developed by the US publicly traded company Medistem Inc, who supported these studies.

"We are proud of assembling such a strong, clinically experienced team to contribute to these studies" said Dr. Thomas Ichim, CEO of Medistem. "Dr. Ewa Carrier and Suman Kambhampati are hematologists who use stem cells on a regular basis, Dr. Angle is a vascular surgeon, who like Dr. Murphy sees CLI on a daily basis, and Dr. Amit Patel has performed numerous cardiac stem cell clinical trials. With such a team that understands not only the science, but also the practical implementation, we feel we are well positioned to translate this discovery into a practical therapy in the near future".

Source: BioMed Central

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