New Hope for Diabetic Wound Healing

by Alice Merry

Article published on January 1st 2012 | Health

Most common wounds don't require more than the contents of a first aid kit such as wound dressings etc. But caring for diabetic wounds is not as simple and can be quite complicated. Delayed healing or no healing is the biggest problems with such wounds. Current therapies have largely been unable to satisfactorily address the issue of delayed healing in diabetic wounds. However, a new research by Korean scientists shows that using cells from human umbilical cord can accelerate wound healing in diabetic patients. This therapeutic approach has been successfully used in stroke and heart attack patients in the past.

Diabetes cause several complications, some of which can make wound healing difficult. These include nerve damage and narrowing of arteries. Adequate blood flow is required for proper wound healing and both of these conditions adversely affect the flow of blood especially to lower limbs and extremities. Diabetic wounds of lower extremities can have serious consequences including amputations. A large number of foot ulcers in diabetic patients end up in amputation. Therefore, it is extremely important that diabetic wounds heal as quickly as possible.

Dr. Wonhee Suh of the CHA University Stem Cell Institute, together with colleagues conducted a study using two groups of mice with diabetic wounds. They transplanted one group of mice with human umbilical cord blood-derived endothelial progenitor cells (EPCs). The researchers observed increased wound healing and revascularization in the mice that were given EPC. They found that in this group of mice, growth factors and cytokines were produced in large quantities at the wound site, which significantly helped in accelerating the healing process.

"The transplantation of EPCs derived from human umbilical blood cells accelerated wound closure in diabetic mice from the earliest point," said Dr. Suh. "Enhanced re-epithelialization made a great contribution in accelerating wound closure rate. It remains unclear; however, which mechanism plays the dominant role in EPC-mediated tissue regeneration."

"This experimental study opens the possibility of the future clinical use of endothelial progenitor cells derived from human cord blood in the treatment of diabetic wounds in humans" said Prof. Voltarelli, Professor of Clinical Medicine & Clinical Immunology at the University of Sao PÃ£ulo, Brazil and section editor for Cell Transplantation. "Interestingly, it also shows that the culture medium used to grow the cells (conditioned media) has the same healing effect as the cells, so that it could be used as a cell-free form of treatment."

Article Source:
http://www.articleside.com/health-articles/new-hope-for-diabetic-wound-healing.htm - Article Side

Alice Merry - About Author:
Looking for high quality, reliable and affordable a medical supplies or a first aid kits? Look no further! Our top quality products are simply perfect for everyone.

Article Keywords:
wound healing,diabetic wounds,diabetic wound healing,accelerate wound healing

You can find more free articles on Article Side. Sign up today and share your knowledge to the community! It is completely FREE!