



CONNECT

Egg shell graft for healing chronic wounds

Background

As the largest tissue network in Germany, the German Society for Tissue Transplantation (DGFG) organises tissue donations nationwide. The non-profit organisation is backed by four university hospitals and one Diakonie hospital, whose overriding goal is to help patients regain a better quality of life through tissue donation. In 2021, the DGFG was awarded the German Wound Prize 2021 for its successful treatment „Wound Healing with Amnion“ in cooperation with the Rhein-Maas Klinikum.

Amniotic grafts - diverse areas of application in medicine

The human body is normally able to close smaller wounds on its own within a short time, so that the affected areas heal on their own in a few days or weeks. Nevertheless, there are also wounds whose healing is not standard, but rather problematic, so that they have not (completely) healed even after four to twelve weeks of treatment. These are called chronic wounds, which often occur in patients with circulatory disorders or diabetes mellitus.

Depending on the severity, chronic wounds are often treated with vacuum dressings, wound dressings with silver, activated charcoal or skin grafts. Moist wound treatments, which are intended to create an optimal wound healing environment and thus protect the wound from drying out and from infestation by germs, are also frequently used. Despite intensive efforts, however, wound closure often remains unsuccessful.

A new variant that promises a miraculous closure of chronic wounds is the treatment with amnioma. The amniotic membrane is obtained from the placenta during planned caesarean births. It is the inner, bloodless, thin egg skin of the maternal placenta facing the foetus, from which tissue grafts can be made. This is characterised by wound-healing and anti-inflammatory properties and acts like a booster that allows wounds to close by self-healing and prevents scarring. The greatest advantage, however, is that the tissue transplant very rarely triggers rejection reactions in the patient's immune system. This is due to the fact that the amniotic membrane is located between two intrinsically foreign immune systems - namely of mother and child - and thus incompatibilities and rejection reactions can be avoided in a natural way.

The German Society for Tissue Transplantation developed this method together with surgeons from the Rhein-Maas Kliniken in Würselen. The amniotic membrane obtained from the placenta donation is applied to the affected area like a plaster. Since tissue donations and organ donations



Your Connection
to MedTech
Expertise

are still only available in small quantities, it is all the better that several hundred placenta donations can be obtained from one placenta donation. Another difference to organ transplants is that the tissue is not transplanted immediately, but is first processed into transplants in specialised tissue banks. Due to the availability and the aforementioned patient benefits, the DGFG was already able to arrange more than 2000 amnioma preparations last year.

In order to make this therapy option increasingly available to patients, the DGFG provides (human) amniotic membrane for clinical use in chronic wounds - under the approval of the Paul Ehrlich Institute (PEI). In cases of absolute stagnation of wound healing and lack of therapy options, the amnion is like a kind of booster, which is intended to stimulate the wound to heal itself better.

In addition to the use of Amnion in wound healing disorders, it is also used in ophthalmological applications, in orbital, oral and maxillofacial surgery, as well as in gynaecological surgery and as a temporary skin substitute in thermal injuries.

Would you like to learn more about the innovative method for treating chronic wounds and its background? We have researched an overview of potential contacts from the industry for you. See for yourself! arcoro CONNECT connects industry experts, companies and interested parties in medical technology.

INDUSTRY EXPERT	JOB POSITION	FIELD OF EXPERTISE
Dr. Nicola Hofmann	Scientific Director at DGFG	Tissue transplantation
Prof. Dr. Hans-Oliver Rennekampff	Head Physician of the Clinic for Plastic Surgery, Hand and Burn Surgery, Rhein-Maas Klinikum	Tissue transplantation
Martin Börgel	CEO at DGFG	Tissue transplantation

© arcoro GmbH • www.arcoro.de



Your Connection
to MedTech
Expertise