



New Material and New Method for Reshaping Lost Tissue in Situ

Gehl G., Fiebrig I., Zentrum Felsenburg, Craniofacial Prosthetics, 8500 Frauenfeld, Switzerland
www.gerolfgehl.ch info@gerolfgehl.ch

Purpose: After the loss of soft tissue in the surface of the body generally the defect is surgically reconstructed with a flap. But this is not always possible.



Epitec, Leibinger-Stryker

Another option for the rehabilitation is the reconstruction with prostheses as a substitute in the colour and shape of the lost of the body. However we developed a new mineralic substance and a method for reshaping the contours of lost bodyparts in situ.



Methods and Materials:

The mineralic substance is applied as a powder in the wound and then the wound is closed by bandage for three or four days. After these days the wound is cleaned again and after debridement and the application of a new portion of the wound healing substance the wound is bandaged again. We do not use any growth factors or proteins. Our material is pure mineralic substance. It is not a drug but it is a medical device.



Results: After three to six weeks the cavity of the wound is filled with ingrown juvenile tissue. Thus we could cure diabetic feet and a necrotic finger.



After four pilot cases in which we could cure necrotic to nicely vascularised juvenile soft tissue we developed in a further step shapes and moulds of bodyparts and facial parts which are modified facial- and breast prostheses of our standard prosthetics programm. These standard shapes for bodyparts have a thin layer of our wound healing substance on their back side.

Conclusions and Visions: The goal is to let the soft tissue grow along the backside of the preshaped template. While the soft tissue in the depth of the wound is fed with our mineralic wound healing substance the bodyshape template is the limiting surface cover for the ingrowing soft tissue which creeps along the back side of the template. The template is used as a bandage and it is removed every few days, then it is replaced after the debridement of the wound and the application of the wound healing substance.



The advantage of the new material and method is that we can avoid scars and we see a new use for facial and breast templates for the remodelling of soft tissue in situ. Thus we reshape lost parts of the body by remodelling the tissue with the help of a mineralic powder which lets soft tissue grow into the preshaped templates which covers the defect as a wound healing plate.



A template can be mirrored for the defect side by **Materialise / SurgiCase** and will be used as a soft tissue remodelling wound healing plate.