5th International Conference on
Wound Care, Tissue Repair and Regenerative Medicine
April 15-16, 2022 | Paris, France

Received date: 18-01-2022 | Accepted date: 05-02-2022 | Published date: 15-04-2022

Biodegradable chitosan wound dressing in the treatment of skin graft donor-sites

Borisov V S, Sachkov A V, Zhirkova E A, Kaplunova M Yu, Pidchenko N E, Pavlov AV, Frolov S V, Medvedev A O and **Andreev Yu V**
N.V. Sklifosovsky Research Institute for Emergency Medicine of The Moscow Health Department, Russia

Objective: We compare the efficacy of new bioplastic material based on chitosan nanofibers* and atraumatic fine-mesh gauze in the treatment of skin graft donor-sites.

Materials and methods: In 30 patients with burns of II-III degree skin grafting surgery were performed. In 15 patients of group I: donor sites were closed with material based on nonwoven chitosan nanofibers*. In 15 patients of group II: donor sites were covered with dry gauze. The goal: compare the duration of healing, risks of local infection, severity of pain by visual analog scale (VAS).

Results: In group I the donor sites epithelization takes Me 8 (8;9) days. Biodegradation of bioplastic material induced the growth of collagen fibers and wound healing. In 1 patient (6,7%) local infection were observed. In group II donor site healing takes Me 10,5 (10;11) days (p=0,001). 4 patients (26,7%) in group II had local infection and additional treatment required. VAS for patients of group I was Me 2 (2;3) points, and more activiti were fllowed in 3-4 days after surgery. But pain syndrome in group II was more significant – Me 6 (5;6) points.

Conclusions: bioplastic materials showed their high efficiency for treatment of wounds of donor sites resulting in decreasing of wound healing duration, and the level of pain reduction.

Recent publications

1. Kaplunova M Yu, Borisov V S, Ponomarev I N, Sachkov AV, Borovkova N V. A clinical case of stimulation of epithelilsation of long-term non-healing wounds of donor areas by topical application of plateless-free platelete lysates. The Russian Journal Difficult patient. 2021. V. 19. No. 6. S. 45-49.

2. Borisov V S, Klychnikova E V, Vuimo T A, Kaplunova M Yu, Tazina E V, Bogdanova A S. Possibilities of laboratory diagnosis in predicting the development of venous thromboembolic complications in patients with thermal injury. Russian journal of cardiology. 2020. V. 25. No. S1. pp. 3-4.

3. Borisov V S, Sachkov A V, Kaplunova M Yu, Titova G P, Borovkova N V, Ponomarev I N, Mironov A S. Experience in using biological coatings in complex treatment of extensive burn wounds. The Russian Journal Medical alphabet. 2020. No. 13. S. 39-43

Speaker Biography

Borisov V S defended his thesis at the age of 44 at the Tver Medical Academy, Tver, Russia. Graduated from the Kalinin State Medical Institute with a degree in general medicine. I am a certified practicing surgeon. Since 2004, I have been working as a senior researcher in the burn injury department N.V. Sklifosovsky Research Institute for Emergency Medicine, Moscow, Russia. Borisov Valery is the author of more than 80 publications, 3 RF patents for inventions (Hirsch Index RSCI - 5).

e: BorisovVS@mail.ru

Notes: