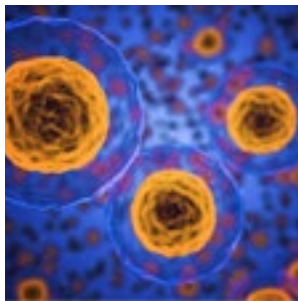
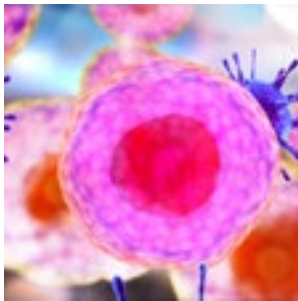

Scientific Tracks & Sessions

June 14, 2022

Wound Care Summit 2022



3rd International Conference on
WOUND CARE, TISSUE REPAIR AND REGENERATIVE MEDICINE
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Wound Care | Oncological Wound Care | Pressure Injury Management



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Karin Schutze
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Title: The use of NovoSorb™ biodegradable temporising matrix (BTM™) in the reconstruction of complex soft tissue defects - An oncological, aesthetic, and practical solution

Alex Parker | Lancashire Teaching Hospitals NHS Foundation Trust | UK

Title: Influence of peptide complex mesotherapy on innate and adaptive immunity

Alexandra I Sergeeva | Rostov State Medical University | Russia

Title: Interactive wound dressings in the treatment of venous ulcers

S M Yumin | Pirogov Russian National Research Medical University | Russia

Title: Various methods of sacral pressure sores management in Bangladesh- An early experience

Humayra Z U | Japan East West Medical College Hospital | Bangladesh

3rd International Conference on

WOUND CARE, TISSUE REPAIR AND REGENERATIVE MEDICINE

June 13-14, 2022 | Webinar

Received date: 01-05-2022 | Accepted date: 20-05-2022 | Published date: 24-06-2022

The use of NovoSorb™ biodegradable temporising matrix (BTM™) in the reconstruction of complex soft tissue defects - An oncological, aesthetic and practical solution

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Background: NovoSorb™ Biodegradable Temporising Matrix (BTM™) is a novel synthetic, polyurethane bilayer dermal template. It is composed of a 2mm biodegradable and bio-compatible porous matrix membrane, that allows for the infiltration of cellular material, with an overlying superficial temporary sealing membrane. This superficial membrane is designed to be removed after a period of weeks, revealing a fully neovascularised dermis ready for definitive autologous split skin graft (SSG) coverage. This case series details the use of BTM™ in the reconstruction of 22 different soft tissue defects and their reported outcomes.

Method: Retrospective case series of patients from Lancashire Teaching Hospital Plastic Surgery department with a soft tissue defect, that was reconstructed using BTM™. Data collected included patient demographics; co-morbidities; indication for BTM use; anatomical area, depth, and total body surface area of defect; time from application of BTM™ to skin graft; method of fixation and dressing as well as percentage success and any complications.

Results: 22 patients were identified with a variety of different soft tissue defects and aetiologies. Soft tissue defect TBSA ranged from <1% to 8% with a median of <1%. In many cases patients had significant co-morbidities. In all cases BTM was secured with sutures and dressed with a silver based non adherent dressing +/- NPWT. 18 patients had >90% successful graft take, 1 patient 70% graft take, 2 patient's had complete graft loss and 1 patient not documented. Both graft failures were associated with pseudomonas positive wound swabs.

Conclusion: BTM™ provides a robust alternative to flap re-

construction in patients with significant comorbidities, limited donor sites or when a less-invasive approach is preferred. Further larger, randomised studies are required to evaluate this novel technique compared against both its animal alternatives (e.g. Integra™) and more traditional reconstructive techniques with emphasise on resistance to infection, scar contracture and aesthetic outcome.

Abbreviations

BTM™ - Biodegradable Temporising Matrix

TBSA - Total Body Surface Area

NPWT - Negative Pressure Wound Therapy

SSG - Split Skin Graft.

Recent Publications

1. Li H, Lim P, Stanley E, et al. Experience with NovoSorb® Biodegradable Temporising Matrix in reconstruction of complex wounds. ANZ J Surg. 2021;91(9):1744-1750.
2. Radtke C, Panzica M, Dastagir K, Krettek C and Vogt PM (2016) Soft Tissue Coverage of the Lower Limb following Oncological Surgery. Front. Oncol. 5:303.

Biography

Alex Parker is currently undertaking core surgical training in the North West of England with the aspiration to specialize in Burns & Plastics. He is a strong healthcare service professional with a Bachelor of Medicine, Bachelor of Surgery - MBChB from University of Liverpool as well as a Bachelor of Science - BSc in Molecular Medicine from University of Sussex.

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3rd International Conference on

WOUND CARE, TISSUE REPAIR AND REGENERATIVE MEDICINE

June 13-14, 2022 | Webinar

Received date: 20-02-2022 | Accepted date: 10-03-2022 | Published date: 24-06-2022

Influence of peptide complex mesotherapy on innate and adaptive immunity

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Statement of the problem: The ability to improve skin condition with bioactive peptides deserves a lot of interest. Still, the topic is not covered in scientific literature. The purpose of this study is to find out the changes in the homeostasis of the body mediated through the immune system and the changes in the quality of life.

Materials and methods: In this study, the effect of a preparation containing peptide complexes Hydro Line Extra B. Observation group: 64 patients. Injections: a course of 5 procedures every 14 days. Before and after the course of procedures, the activity of adaptive immunity (CD3+, CD4+, CD8+, CD19+, CD3 + CD25+, CD95+, Foxp3+, CD8+ Gr+, immunoglobulins: IgA, IgG, IgE, and congenital (TLR2, TLR4, TLR9), IgM, CD16+; HCT spontaneous and stimulated tests. Biochemical parameters and thyroid hormones were also studied. Changes in the quality of life: dermatological index "Quality of Life" (Adaskevich V.P., 2004) was used.

Research results: The redistribution of the population composition of the lymphoid lineage of immunopoiesis in the peripheral bloodstream is documented. There is an increase in CD4+ and CD8+ subpopulations and changes in the dynamics of activation indicators; a decrease in CD25+; an increase in the proportion of peripheral T-regulatory lymphocytes CD3+ CD25+ FoxP3+. Adaptive immune response: a decrease in B-lymphocytes, an increase in all classes of immunoglobulins, a decrease in natural killer cells. Neutrophilic link: activation of spontaneous oxygen-producing activity. No changes in the thyroid hormones and biochemical studies. All patients mentioned the improvement of quality of life.

Conclusions: as a result of the fact that the course administration of peptide complexes leads to a change in the body's homeostasis mediated through the immune system, exerting an obvious effect on innate and adaptive immunity, it is possible to level the clinical efficacy of the course of procedures, which is of interest for further research.

Recent Publications

1. Sizyakina L P, Sergeeva A I, Andreeva I I. Discoordination of the processes of activation and suppression of immunocompetent cells during mesotherapy with hyaluronic acid. Medical Herald of the South of Russia. 2021; T. 12. No.1. P. 68-73.
2. Sizyakina L P, Sergeeva A I. Immunological aspects of effects of mesotherapy with hyaluronic acid. Immunology. 2021. T. 42. - No 2. - P. 159-165
3. Sizyakina L P, Andreeva I I, Sergeeva A I. Immunotropic effects of mesotherapy in the correction of age-related skin changes. Medical Immunology. 2021. T. 23. - No 3. - P. 585-592.

Biography

Alexandra Sergeeva is an experienced specialist with an excellent knowledge of cutting-edge technologies in modern dermatology and cosmetology. She is an expert in such areas as various facial procedures, mesotherapy, thread lifting, face contouring, laser, botulinum toxin, IPL therapy and many others. Her desire to master the skills constantly has led to becoming a certified GP with aesthetic privilege in one of the most famous clinics in the UAE. In particular, she is eager to research the influence of injection procedures in cosmetology on functioning of the immune system.

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3rd International Conference on

WOUND CARE, TISSUE REPAIR AND REGENERATIVE MEDICINE

June 13-14, 2022 | Webinar

Received date: 20-02-2022 | Accepted date: 10-03-2022 | Published date: 24-06-2022

Interactive wound dressings in the treatment of venous ulcers

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Objective: To evaluate the efficacy and safety of interactive wound dressings in the treatment of venous ulcers.

Material and methods: An open non-randomized prospective study included 40 outpatients over 18 years old with venous trophic ulcers area was up to 25 cm². Exclusion criteria: severe comorbidities, diabetes mellitus or lower extremity artery disease, impaired movements in lower limb joints, hypersensitivity to silver. Wound dressing or combination of dressings was chosen depending on symptoms and wound healing stage. At the 1st stage, ulcer debridement and dressing were performed daily. We used a hydrogel, alginate, carboxymethyl cellulose coatings, coating of hydrophilic polyurethane foam, and dressing comprising laminated viscose material soaked in povidone-iodine ointment. At the 2nd or 3rd stage, we applied different mesh coatings. Dressing was carried out every 2-3 day at the stage of granulation and epithelialization.

Treatment lasted 8 weeks; follow-up examinations were carried out weekly. We analyzed symptoms of venous disease, state of the ulcer and surrounding tissues, as well as ulcer area. Adverse side effects of treatment were considered.

Results: Overall sample enrolled 40 participants including 13 (32.5%) men and 27 (67.5%) women aged 32 - 81 years (median 61.5, interquartile range 48.5 - 70.5). Thirty-eight were completely followed-up. One patient left for family reasons. Another patient required hospitalization in the department of purulent surgery.

Treatment resulted ulcer healing in 19 (50%) out of 38 patients. In 14 cases, complete epithelialization occurred within the first month. By the end of treatment, ulcers area decreased by 2 times (from 298.4 to 145.4 cm², $p < 0.0001$). Complete cleansing of ulcer from necrotic tissues and fibrin was observed in 10 (26%) patients. Single areas of fibrinous tissue persisted on the wound surface in 9 (24%) patients. No

epithelialization was observed only in 1 (3%) case.

Dressings caused no technical difficulties for patients. There were no major adverse events.

Conclusion: Interactive wound dressings combined with compression hosiery is ease, effective and safe approach for venous ulcers. This method contributes to fast cleansing of ulcers and stimulates regeneration processes in most patients.

Recent Publications

1. Bogdanets L I, Yumin S M, Golovanov O V, A N Kuznetsov. Experience in the use of interactive wound dressings in the treatment of venous ulcers. *Phlebologia*. 2021, Vol. 15 Issue 4, p268-276. 9p.
2. S M Yumin, V V Andriyashkin, S G Leontiev, I A Zolotukhin. Partial occlusion of the inferior vena cava in prevention thromboembolism of the pulmonary arteries. *Phlebology*, 1, 2010.
3. Bogdanets L I, Yumin S M, Golovanova O V, Kuznetsov A N. Experience in the use of interactive wound dressings in treatment venous ulcers. *Phlebology*. 2021;15(4):268–276

Biography

S M Yumin, born in 1979, currently working as an assistant at the Department of Faculty Surgery No. 1 of the medical faculty of the Russian National Research Medical University named after N.I. Pirogov and a surgeon at the MEDSI clinic. In 2002, I graduated from the Medical Faculty of the N.I. Pirogov Medical University. From 2002 to 2004 I was trained in full-time clinical residency, and from 2004 to 2007 I studied in full-time clinical postgraduate studies at the Department of Faculty Surgery of the Medical Faculty of the University. In 2011 I defended my PhD thesis on the topic: "Long-term results of treatment of ilio caval thrombosis." From 2007 to the present, I have been working as an assistant at the Department of Faculty Surgery. Certificate in the specialty "surgery", confirmed in 2019. Since 2004 and to this day I work part-time as a surgeon, I have modern methods of diagnosis and treatment of surgical diseases, I have experience in inpatient and outpatient surgical care. The main areas of surgical activity: phlebology, general surgery, purulent surgery.

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TREATMENT OF VENOUS ULCERS USING INTERACTIVE WOUND COVERINGS



3rd International Conference on

WOUND CARE, TISSUE REPAIR AND REGENERATIVE MEDICINE

June 13-14, 2022 | Webinar

Received date: 05-02-2022 | Accepted date: 25-02-2022 | Published date: 24-06-2022

Various methods of sacral pressure sores management in Bangladesh- An early experience

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Pressure sores are the challenging wounds to manage surgically, not only for the reconstructive techniques but also for the comorbidities and the special physical characteristics of various patients. This is a retrospective study of 32 cases of sacral pressure ulcers of patients aged 25 to 76 years managed over a period from 2016 to 2021 at various hospitals. Various reconstructive options i.e., rotation-advancement flap, V-Y advancement fascio-cutaneous flap, gluteal perforator flaps etc. were considered for the coverage of sacral wounds grading III, IV and size varying from 20cm² to 200cm². The donor sites were closed primarily in all cases. Follow-up observations were conducted for an average of 9 months (ranged from 6 months to 2 years). Cosmetic results were satisfactory, with no surgical site breakdown or recurrence in any of the cases. Other than various reconstructive surgeries following an algorithm various technique of wound preparation is crucial for better outcome.

Recent Publications

1. Humayra ZU, Awwal R, Kalam MA, et al. Vaginal Reconstruction Using Pudendal Thigh Flap: A Study of 20 Cases. *Surg Res.* 2019; 1(3): 1-6.
2. Humayra Z U et al., Various methods of reconstruction for fingertip injuries: millimeters matters. *J Univer Surg* 2019, Volume:7.
3. Afrina Sharmin, Mostafa Amin Khan, Zaman Ummay Humayra, Rezwan Shah, et al. Challenges of dealing diabetic foot and step wise surgical management. Volume 2. Number 2. July 2020.

Biography

Zaman Ummay Humayra has completed her fellowship on plastic and reconstructive surgery from Tokyo Women Medical University, Japan at the age of 34 years and later she completed fellowship on same subject from Bangladesh College of Physicians and Surgeons. She is working as associate professor in Plastic Surgery Department in Japan East West Medical College Hospital, Bangladesh. She is actively associated with cancer reconstruction and breast reconstruction surgeries. She has published 10 papers in different national and international journals and has been serving as an editorial board member of a national journal.

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