

3rd Euro Nursing & Medicare Summit

July 27-29, 2015 Valencia, Spain

Stimulation of regenerative processes in chronic wounds with platelet-rich autoplasm - An experimental and clinical study

V N Obolenskiy¹, D A Ermolova¹, M S Makarov², N V Borovkova² and L A Laberko¹

¹Russian National Research Medical University, Russia

²Research Institute of Emergency Care, Russia

Aim: To study the effectiveness of platelet rich plasma (PRP) for clinical use. **Methods:** Blood collected from a peripheral vein of the patients with chronic wounds of various etiologies was used as a biological material. PRP was obtained by separating blood with the use of BTI equipment. Whole blood platelets were stained with vital fluorochrome dye for further morpho-functional analysis on a fluorescence microscope. Concentration of platelet-derived growth factor (PDGF) in blood serum was determined by enzyme-linked immunosorbent assay (ELISA) using reagents «Qantikine, Human PDGF-BB Immunoassay» and system «Multiskan ascent». Proliferative activity of human fibroblast culture M-22 was assessed in the wells containing different amount of serum PDGF and also using fluorochrome vital dyes. In a clinical study analysis of the treatment outcomes of 81 patients with chronic wounds (CW) of various etiologies was performed. For the treatment of the 44 patients (experimental group: 17 males, 27 females, the mean age-56.0±3.1; trophic venous ulcers (TVU) 3, ulcers of combined etiology (CEU) 8, related to diabetic foot syndrome (DFS) 12, scar-trophic ulcer (STU)-14 and bedsores (BU)-7, the mean CW area was 90.2±14.1 cm²), we used PRP flat clot therapy starting from phase II of wound healing process. Frequency of dressing changes once in 7 days, which allows patient transfers to outpatient care. All procedures were carried out for qualified nurse. For the treatment of the 37 patients (control group: 17 males, 20 females, mean age was 69.5±2.2; TVU-5, CEU-12, DFS-8, STU-5, BU-7; 79.6±12.3 cm²), traditional topical agents were used. **Results:** A direct correlation between concentration and morpho-functional parameters of whole blood platelets and concentration of PDGF in the serum has been observed. Degranulation of platelets is associated with the massive release of PDGF. The study finding was that the content of PDGF in one well equal to 150 pg is associated with the maximum gain of proliferative activity of fibroblasts with their viability being preserved; at the higher PDGF concentrations fibroblasts viability decreased and cells death was observed. In a clinical study 85.4% patients achieved complete CW epithelialization within 46.4±4.3 days (experimental group). In the control group only 11.8% patients achieved wound epithelialization within 3 months. Mean duration of hospital stay was 11.0±2.5 days in the experimental group and 23.1±1.5 days in the control. **Conclusions:** These data allow recommending the clinical use of PRP for stimulation of the regenerative processes.

gkb13@mail.ru

Prevalence of post-traumatic stress disorder among disaster bereaved survivors: A longitudinal study after the 2008 Sichuan earthquake

Xiao-yi Cao

Sichuan University, China

Background/Objectives: Post-traumatic stress disorder (PTSD) is a severe psychiatric symptom, but limited previous studies have focused on the longitudinal course of the psychopathological symptom in bereaved survivors after disasters. This study examined the trajectory of PTSD prevalence, and to analyze the changes in risk factors for PTSD severity among bereaved survivors at 6 months and 18 months after the 2008 Sichuan earthquake. **Methodology/Findings:** This was a longitudinal study with a convenience sample of 113 bereaved survivors evaluated at 6 months and 18 months post-earthquake. The measures used in the study included the revised version of the Impact of Event Scale and a questionnaire including demographic characteristics, and earthquake-exposed and post-earthquake variables. The results indicated that the prevalence of PTSD among bereaved survivors decreased significantly from 38.9% at 6 months to 16.8% at 18 months. Loss of a child, directly exposed to the death of family members and property loss during the earthquake, as well as post-earthquake mental health services utilization were significant risk factors for PTSD severity at both assessments. Self-reported health status after the earthquake was a significant contributing factor to PTSD severity at 6 months post-earthquake. Bereaved survivors who lived in shelters or temporary houses reported significant higher PTSD score than those who lived in original houses at 6 months. **Conclusions/Significance:** These findings can contribute to post-disaster psychological rescue work. The bereaved survivors at high risk for PTSD should be particularly targeted. These outcomes support providing effective and sustainable mental health services for bereaved trauma survivors.

cao_xiaoyi@126.com