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The New treatment for critical patients Medicine-results of bone marrow electro-stimulation (Tbilisi,Georgia).

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Bone marrow electro stimulation results were analyzed. around 1404 critical patients, among them 628 women and 775 men (22-91 years old patients) had been exercise; Bed-days amount 15444 Each patient was in coma. The patients were treated with standard treatment.By treatment of the main group patients bone marrow electro stimulation has been used constantly during 6 days after hospitalization. Results show that the use of electro stimulation reduces lethality and patient treatment costs. Patients don't feel any discomfort or suffer complications, and the treatment could be carried out easily. The results absolutely justify the use of bone marrow electro stimulation method for treatment of critical patients.

Kay Words: Bone marrow, electro stimulation, critical patients, Lethality, bed-days, treatment cost

Introduction: Bone marrow stimulation is essential method for the regeration of tissues and cells.. Critical care medicine institute was the first to study this method and the results were published sins 2007. (Zv.Kheladze and othe r- 2007,2008,2010,2011) .In Critical Care Medicine in Georgia various methods for stimulation differentiation process of Stem Cells are presented: Plasma irradiation processing, Infusion of adrenaline and nitroglycerine in bone marrow and etc. It was found out that the most effective is bone marrow electrical impulses processing among them. The objectives of the work is to study the results of bone marrow electro stimulation in critical care medicine with the larger number of patients.

Materials and Methods: Had been exercised around 1404 critical patients, among them 628 women and 775 men, bed-days amount was b/d 15444, the average holding time on the bed ofpatients was 5.5 bed-days, patients were from 22 to 91 years old. Comaranged by Glasgow scale from 3 to 8 score,Critical condition wasassociated with acute disorder of brain blood circulation 30 % , acute respiratory failure 26 % , hypovolemicshock, 10% polytrauma 5 % , endotoxic shock , septic shock 11 % , , asthmatic status 5 % ,anaphylactic shock 5 % and alcohol intoxication 5 % . There are revealed concomitant diseases such as:Arterial hypertension, chronic heart failure, atrial arrhythmias, diabetes and other. Was carried out standard treatment, such as Antibacterial, detoxification and Dehydration Therapy, also correction of electrolyte and acid-basebalance and other measures, artificial lung ventilation, vasopressin and inotropic therapy,sedation and analgesia and other symptomatic treatment. On this background, in some cases inaddition are carried out bone marrow electrostimulation, constantly for the first 6 days afterhospitalization. Had been carried out monitoring and artificial lung ventilation of all patients, their coma qualityin accordance with the Glasgow Coma Scale ranged between 3-8 score, the treatmentefficiency of bone marrow electrostimulation was checked based on the lethality, complications,bed days and treatment value. Also was studied biochemical, morphological and ice-basebalance, and number of immunocompetent cells in the brain marrow..Patients re divided into two groups.The first control group 952 patients, to whom were carried out only standard treatment. Among them were 422 women and 530 men; Average age 65-85 years; Bed-days amount 9662 , theaverage holding time on the bed of patients was 5.7 b/d. The reasons for critical condition inaccordance with the frequency were: Acute failure of blood circulation in Brain – 262 patients, Acute respiratory failure – 237,Hypovolemic shock – 73, Polytrauma - 30, Endotoxic shock - 30, Septic shock - 20,Cardiological shock – 19, Asthmatic status - 3, anaphylactic shock – 6, and heavy myasthenia – 2and others. The second main group is consisted with 452 patients, on the background of treatment had beencarried out Stem Cells electrostimulation. Among them were 206 women and 245 men; Averageage 22-91 years; Bed-days amount 5782 b/d, the average holding time on the bed of patients was6 b/d. The reasons for critical condition in accordance with the frequency were: Acuterespiratory failure – 115, Acute failure of

blood circulation in brain - 83 Hypovolemic shock –24, and so on others critical conditions

Table № 1

№	woman	man	age	bed-days
Total	628	775	22- -91 √	15444
Control group	422	530	65-85 √	9662
main group	206	245	22-91 √	5782

Results and Discussion: The method itself is easy to perform for med-personnel, patient doesn't feel any discomfort and is not caused complication, also there had not been revealed any complication related to manipulation while carrying out stimulation process. The lethality in the first group was 29.5%. There are interesting results relating lethality indicator in different pathologies. During blood circulation failure in brain the lethality was 40.%, during Acute respiratory failure it was 36.4%, and during Hypovolemic shock it was 29.2%. The cost of one bed-day is 800 GEL and the cost of patient treatment is 4 800 GEL. For 1 patient's cured was spent approximately 4228 GEL. Lethality in the second group was 21.8%. Lethality indicator in different pathologies is the following: acute respiratory failure – 23.5%, blood circulation failure in brain – 21.6%, Hypovolemic shock – 0.7%. The cost of one bed-day is 850 GEL and the cost of patient treatment is 5100 GEL if the patient will be hold in hospital for 4.9 b/d; for 1 patient's cured was spent approximately 4165 GEL. Thus there was revealed that in the main group compared with the control group was decreased total lethality by 7.9%, although the lethality was decreased during other pathologies, for example: in blood circulation in brain it was decreased by 20.8%, during acute respiratory failure – 13.9%, during hypovolemic shock – 27.7%, also was decreased the holding time on the bed by 0.9% and the cost for one patient treatment was reduced by 350.7 GEL.

Table № 2

№	Lethality	bed-days	treatment cost
Total	51,3 %	15444	8965
Control group	29,5 %	9662	4800 ლ
main group	21,8%	5782	4165 ლ

Conclusion: Bone marrow electro stimulation results were analyzed. Around 1404 critical patients, among them 628 women and 775 men (22-91 years old patients) had been exercise; Bed-days amount 15444 Each patient was in coma. The patients were treated with standard treatment. By treatment of the main group patients bone marrow electro stimulation has been used constantly during 6 days after hospitalization. Results show that the use of electro stimulation reduces lethality and patient treatment costs. Patients don't feel any discomfort or suffer complications, and the treatment could be carried out easily. The results absolutely justify the use of bone marrow electro stimulation method for treatment of critical patients.

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ახალი მკურნალობა კრიტიკული ავადმყოფებისთვის - ძვლის ტვინის
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შესწავლილია 1404 კრიტიკულ მდგომარეობაში მყოფი პაციენტი, აქედან ქალი იყო 628, კაცი კი 775, პაციენტების ასაკი მერყეობდა 22-დან 91 წლამდე. მათ კლინიკაში დაჰყვეს 14281 საწოლ-დღე, ყველა პაციენტი იმყოფებოდა კომის მდგომარეობაში. ავადმყოფებს უტარდებოდათ სტანდარტული მკურნალობა,ამ ფონზე ძირითადი ჯგუფის ავადმყოფებს უტარდებოდა ძვლის ტვინის ელექტროსტიმულაცია კლინიკაში შემოსვლიდან პირველი 6 დღის განმავლობაში მუდმივად. მიღებულმა კვლევებმა უჩვენა რომ ძვლის ტვინის ელექტროსტიმულაციის გამოყენება ამცირებს სიკვდილიანობის მაჩვენებელს და მკურნალობის ღირებულებას. ამასთან ეს მეთოდი არ იწვევს გართულებებს,არ უქმნის ავადმყოფს დისკომფორტს და ტექნიკურად იოლი შესასრულებელია.მიღებული შედეგები მიუთითებენ კრიტიკულ მდგომარეობაში მყოფი პაციენტების მკურნალობაში ძვლის ტვინის ელექტროსტიმულაციის მეთოდის შემოღების მიზანშეწონილობას.