

Z. Kheladze, Zv.Kheladze,N.Kadjaia,M.Gutashvili

New data of the results of bone marrow electro stimulation in treatments of patients with critical health situation

Institute of Critical Care Medicine,Tbilisi,Georgia.

Had been examined 1434 patients in critical condition, from which 648 are women and 805 are men, the age of the patient varies from 22 to 91 years. The hospitalization period is 1724 bed-days; all patients were in coma condition, all of them underwent standard treatment, along with the standard treatment on the major group patients were performed bone marrow electro stimulation within first 6 days from the hospitalization date. The researches shown that the usage of bone marrow electro stimulation decreases mortality rate and treatment cost, does not cause irritation, do not pose the patient inconvenience and its performance is easy technically. The obtained results show that it is recommended to introduce bone marrow electro stimulation method for the patients in critical conditions

Key words: The bone marrow, Electro stimulation,Critical patients, The regeneration-reparation processes.

Introduction.The bone marrow electro stimulation method had been originally developed in the Critical Care Medicine Institute of Georgia (Zv. Kheladze 2007). While liquidating critical condition it is important to activate regeneration-reparation processes. It supports to recover vital functions within the optimal time period. In the ruling of regeneration-reparation processes the major component is adequate progress of stem cell differentiation process. Therefore the study of electro stimulation became priority in critical care medicine. Had been studied its results during the post-reanimation diseases, strokes and generally with critically ill patients.The present work is a continuation of the work in this direction.

Material and Methods: Had been examined 1434 patients in critical condition, from which 648 are women and 805 are men, the age of the patient varies from 22 to 91 years. The hospitalization period is 15624

bed-days; the neurological status in accordance with the Glasgow Coma Scale is made up 3-8 scale. The 20% of the critical condition was caused due to the ischemic stroke, hemorrhagic stroke-35%, acute respiratory failure-26%, hypovolemic shock-15%, septic shock-13% and traumatic shock-5%, anaphylactic shock – 5%. Asthmatic status-5%. Carbon intoxication – 3%, alcohol intoxication-7%, almost all of whom had underlying conditions such as chronic heart failure, arterial hypertension, diabetes mellitus, from these patients those who were ill underwent standard treatment, which covered artificial lung ventilation, antibacterial, detoxification and dehydrating measures, water and electrolyte balance correction and other measurements of intensive therapy. From the mentioned patients 482 patients along with the standard treatment for the first 6 days permanently underwent bone marrow electro stimulation. Had been used apparatus: Georgia 1,2,3 generation preparations Had been investigated 2 group of patients: The 1st control group includes 952 patients.

Among them 422 were women and 530 men, the average age 65 – 85 years, the bed-days are made up 9662, for one patient 5,7 bed-days. From these patients 262 went treatment process in the clinic with the diagnose: cerebral blood circulation acute disorders; 237 patients - acute respiratory failure; hypovolemic shock-73, polytrauma-30; endotoxic shock-30; septic shock-20; cardiogenic shock-19; asthmatic status-3; anaphylactic shock-6; Asthmatic status-5%. Carbon intoxication – 3%, alcohol intoxication-7%, myasthenia-2.

The second group of patients consisted with 482 persons. Along with the standard treatment had been carried out brain marrow electro stimulation. Among them were 227 women and 225 men, the average age 22-91 years, the amount of bed -days was 5962, 6 bed-days for each patient. In accordance with the clinical conditions 130 patients were undergoing treatment for acute respiratory failure, 93 patients - cerebral blood circulation acute disorders, 26 hypovolemic shock.

Table № 1

N ^o	woman	man	age	bed-days
Total	648	805	22- -91 √	15624
Control group	422	530	65-85 √	9662
main group	227	225	22-91 √	5962

Results and Discussion: The study of brain marrow electro stimulation showed that via this method the elimination time of critical condition, mortality rate of patients and treatment cost are sharply decreased. In accordance with the carried out studies had been revealed that the lethality in the first group patients is made up 29,5%, the cost of one bed-day is 800 GEL and average cost of relevant treatment for one patient is 4800 GEL.

The lethality in the second group patients is made up 24,8%, the cost of one bed-day is 850 GEL and average cost of relevant treatment for one patient is 5100GEL. Through the carried out researches had been outlined that in the main group compared to the control group the lethality had been reduced by 7,2%, with this had been decreased the hospitalization period by 0,9%, and had been reduced the cost for the treatment of one patient by 330 GEL.

Table N^o 2

N ^o	Lethality	bed-days	treatment cost
Total	51,3 %	1724	8965
Control group	29,5 %	9662	4800
main group	24,8%,	5962,	5100

Conclusion : Had been examined 1434 patients in critical condition, from which 648 are women and 805 are men, the age of the patient varies from 22 to 91 years. The hospitalization period is 15624 bed-days; all patients were in coma condition, all of them underwent standard treatment, along with the standard treatment on the major group patients were performed bone marrow electro stimulation within first 6 days from the hospitalization date. The researches shown that the usage of bone marrow electro stimulation decreases mortality rate and treatment cost, does not cause irritation, do not pose the patient inconvenience and its performance is easy technically. The obtained results show that it is recommended to introduce bone marrow electro stimulation method for the patients in critical conditions.

References: 1.Z. Kheladze. „Critical Care Medicine.”, Tbilisi, 2007,--614pp
 2.Zv.Kheladze – dissertation PHD: Progenitor Precursor Committing Superintendence In Critical Care Medicine, .2008, - 35pp.
 3. Z.Kheladze.E .Kartsivadze ,Zv.kheladze.-“Prognitor precursors committing at critical strokes”, ”Critical Care & Catastrophe Medicine”, 2009,N 5, -33-45
 4.Zv.Kheladze,Zv.kheladze –“New Data of Progenitor Precursor Committing In Critical Patents”. ,”Critical Care & Catastrophe Medicine”, 2010,N 6, 24-26.
 5.Zv.Kheladze.E .Kartsivadze ,Zv.kheladze,.N.Barnabishvili .M.Tkemaladze .T.Mazmishvili.-“Prognitor Precursors Committing Therapy During Critical Strokes” ,”Critical Care & Catastrophe Medicine”, 2010,N 6, 57-63 .

6.Z.Kheladze, Zv.Kheladze, E.Kartsivadze, N.Kajaia – “Bone Marrou Electrostimulationshel become a standart treatment for critical patients”„Critical Care & Catastrophe Medicine”, 2014,N13-14, 105-111.

7. Z.Kheladze, Zv.Kheladze, N.kajaia, M.Gutashvili

[The New treatment for critical patients - results of bone marrow](#)

[electrostimulation](#) ”„Critical Care & Catastrophe Medicine”,2015,N15,80-85

ზ.ხელაძე,ზვ.ხელაძე,ნ.ქაჯაია,მ.გუტაშვილი
ძვლის ტვინის ელექტროსტიმულაციის შედეგები კრიტიკულ
პაციენტთა მკურნალობისას
კრიტიკული მედიცინის ინსტიტუტი,თბილისი,საქართველო.

განალიზებულია საქართველოს კრიტიკული მედიცინის ინსტიტუტში ძვლისტვინის ელექტროსტიმულაციის გამოყენების შედეგები. გამოკვლეულია 1434 კრიტიკულ მდგომარეობაში მყოფი პაციენტი, პაციენტების ასაკი მერყეობდა 22-დან 91 წლამდე. მათ კლინიკაში დაჰყვეს 15624 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 მაჩვენებლს 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.