

Progenitor precursors' committing at post-reanimation disease**Kheladze Z., Mumladze K., Kheladze Zv.****Critical Care Medicine Institute. Tbilisi. Georgia.**

In the Critical Care Medicine Institute during last years the numbers of patients with post-reanimation disease have been incised. Mortality and invalidity have high rate as well as the treatment costs. The whole number of treated patients with post-reanimation disease constituted 49, mortality have reached 68,7%, survivors – 31,3% and patient- days have reached to 323 units. Most of patients with post-reanimation disease had heart dysfunction and myocardium infarction. Men were more than women; the first 48 hours were most difficult to survive during critical condition. Invalidity gained to 6,7%, without invalidity had been discharged from the hospital 93,3%. Average number of the patient-days was 6,7, One patient financial ensuring gained 3.500 USD. The Results show that high numbers of survived patients were reached with using therapy of progenitor precursor committing paten (Zv.Kheladze at all. „New usage of electro impulses generator”. 2008.07.01 #4857, ”. Zv.Khelade at all. „New usage of Plasma flow producer 2008.06.26 #4825, Z.Kheladze, Zv.Kheladze „New usage of Nitroglycerin”. 2008.07.11 # P4858). by side traditional treatment.

Key words: post-reanimation disease, progenitor precursors' committing, myocardium activity restoration, respiratory therapy, metabolic infringement correction, survivability.

Actuality

Nowadays, the frequency of post-reanimation disease is rather increased in The Critical Care Medicine Institute. The rates of lethality and invalidity are also high. It is important to mention that treatment is too expensive. For example In the USA, 450 000 people die annually by sudden cardiac death. The middle age of these people was about 60 years. The risk of sudden cardiac arrest is 4-6 times higher after acute myocardial infarction and 6-9 times higher in the presence of the heart failure of II-III functional classes by NYHA. So, about 60% of death was caused by heart stoppage and only 5-6% survives. According to the ACA data in 2009, spending on cardiovascular diseases constituted USD 4753.0 billions. In 2006 program, costs were USD 32.7 billions and treatment costs for one discharged patient constituted USD 10.221. The search was done in 24 regions of South America, in 993 public gather places. Research has been made by medical investigators. In one case they did intensive care only on heart and lungs and in another case they used outer defibrillation together with intensive care. In both groups patients were presented equally by age. Middle age was about 69.8 years. While discharging, from a hospital better result of survival appeared in the group where intensive care was used with defibrillation. 30 patients out of 128 survived - 23.0%. In the second group 15 patients survived from 107 - 14.0%. According to the data of Lincoln Emergency Medicine Service Inc, annually middling number of patients with heart stoppage were 136,2. The most of them were men - 64% and about 36% were women and only 14.4% of these patients survived. Mostly this was caused after medical intoxication, then by trauma and etcetera. The average age in the presence of heart stoppage was 59.7 years. It is also interesting that recovery out of a clinic was achieved in 30.7% of patients, in the patients who were placed in a hospital, it appeared in 14.3%. In the Columbian University according to publication, 506 patients were examined with heart stoppage during pre-hospital research. The total number of patients has been divided in several groups. First group: Number of survived patients which were treated with heart indirect massage and defibrillation were 10.0%. Second group: Survived 80.0% they were treated with indirect intensive heart compression and defibrillation. From total number of patients 506 blood stroke was recovered in 58.0%.

Indirect compression on heart and breast attained to 20 in one minute, blood strokes was recovered in 21.0% of patients. But in cases where this rate was from 81 to 100 blood strokes was recovered in 79.0%. In the cities as Seattle and Washington, where heart and lungs intensive care is widely used, number of survived patients after the heart stoppage is 30%, mortality - 70%. In New York, where defibrillation was mostly used than heart indirect massage, the quantity of survived patients is less 1-2%. In the USA, Kansas, Emergency Medicine Service Inc. presented a consideration: When heart and breast compression is done more frequently (hi rate compression), the result is better during heart stoppage, survived patients after heart stoppage outside of the hospital was increased by 7,5%, in the hospital - by 22,4%, brain function was recovered in 80.0%. According to the data of Cancer Center of European Multi-functional Clinics, heart stoppage appeared in 83 patients diseased with cancer. 41 of them were men and 42 women and middle age was about 56.2 years. In 66.0% of them, the heart work was recovered, 9.6% of them were discharged from a clinic. 3 of them died during next 6 weeks, 2 patients died during 6 months and 3 patients lived during next 3 years. Treatment costs in a clinic for these patients constituted USD 2.959.740. In Norway Haukeland University Hospital, 1.300 patients had heart stoppage. They were in intensive department for 3.4 days, in the common therapy department - 6.8 days and in the intensive care ward they were for 11.2 days. Middle life length for 269 patients, discharged from a clinic, was 6.13 years. In Georgian Critical Care Medicine Institute, heart and lungs intensive care standard is in force, which was certified in 2006 as a result of cooperation of USA Cardiologists Association and European Council for intensive care. It should be considered that the Standard is recognized in medicine internationally and it is based on trustful medical basics. At ventricular fibrillation, heart working restoration is possible to achieve by using of defibrillation, correlation of heart indirect massage, breast compression frequency thirty and two lungs artificial ventilation when this action is done by two assistants, and it is 15:2 - when done by one assistant. Lungs artificial ventilation is managed by mask package "Ambu", trachea intubation, and adrenaline injection in heart area is more recommended. If pulse appears on carotid artery or a sick person's color changes or the eyes gets narrow that indicates that intensive care treatment was effective. Intensive care goes for 40 minutes and is stopped because of no effectiveness.

Based upon the mentioned post reanimation disease is one of the most important problem in critical medicine because of it is characterized with high mortality. For example only last year in the Critical Care Medicine Institute the number of patients with this pathology significantly increased.

Material and methods

In the Critical Care Medicine Institute during 2005 till 2009 year 49 patients with post reanimation disease were registered. In 2005 there was 1 patient with post reanimation disease, in 2006 – two patients, in 2007 – 3 patients, 2008 – 7 and in 2009 – 36 patients. Lethality constituted 67.4%, survivors – 32.6% and number of patient - days 323. Incising of effectiveness in treatment of post reanimation disease has been achieved after inverting of new treatment method by side traditional treatment. By using of Progenitor precursor committing therapy paten (Zv.Kheladze at all. „New usage of electro impulses generator”. 2008.07.01 #4857, ”. Zv.Khelade at all. „New usage of Plasma flow producer 2008.06.26 #4825, Z.Kheladze, Zv.Kheladze „New usage of Nitroglycerin”. 2008.07.11 # P4858). the patient-days' common number in main group raised (schedule #1). Controlled group has been constructed by using published data of respectable hospital annuals in witch were researched 1806 resuscitated patients. From this number of patients survived 15.3% and mortality reached 84.7% (schedule #2).

Schedule #1 (Main group)

Year	Number of the entered patients	Number of the discharged patients	Dead	Number of the bed - days	Woman dead	Man dead
2005	1	0	1	115	0	1
2006	2	1	1	9	1	1
2007	3	1	2	5	2	1
2008	7	4	3	27	1	6
2009	36	10	26	167	9	27

Schedule #2 (Control group)

Researcher	Resuscitated patients amount	Circulation restoration	Lethality	Associated life and sum survived patients
ACA	506	58%	90%	10%
Multi-profile clinic	1300	56%	79,4%	20,6%
Sum	1806	57%	84,7%	15,3%

Results and discussion.

According to the data of the Critical Care Medicine Institute it is clear that from 2005 year the number of post-reanimation disease step by step increased in comparison with last year in current 2009 we had 4, 5 times more patients. (Fig.1) 16 of them were women 33.4%, 32 were men 66.6%. (Fig.2)

Fig.1.

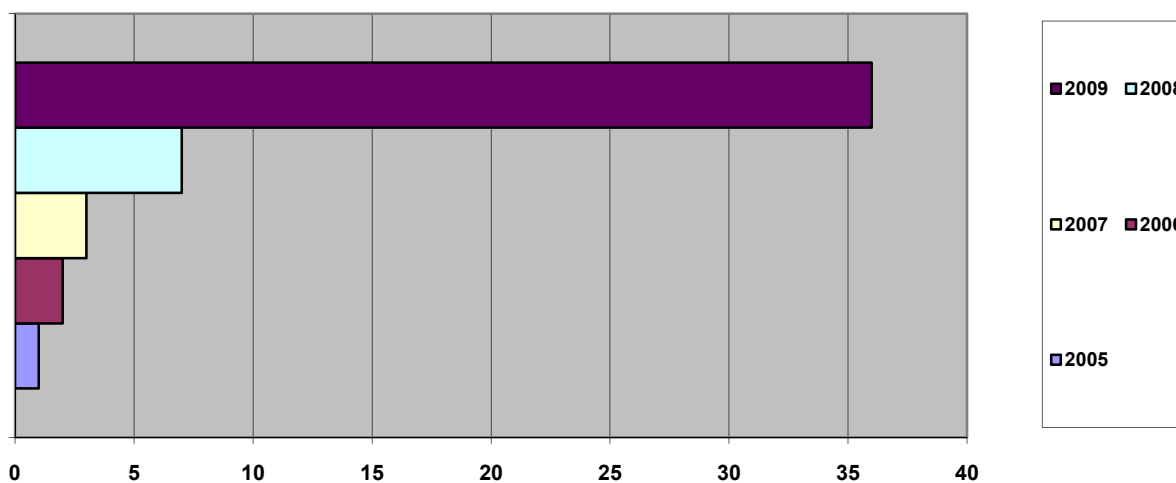
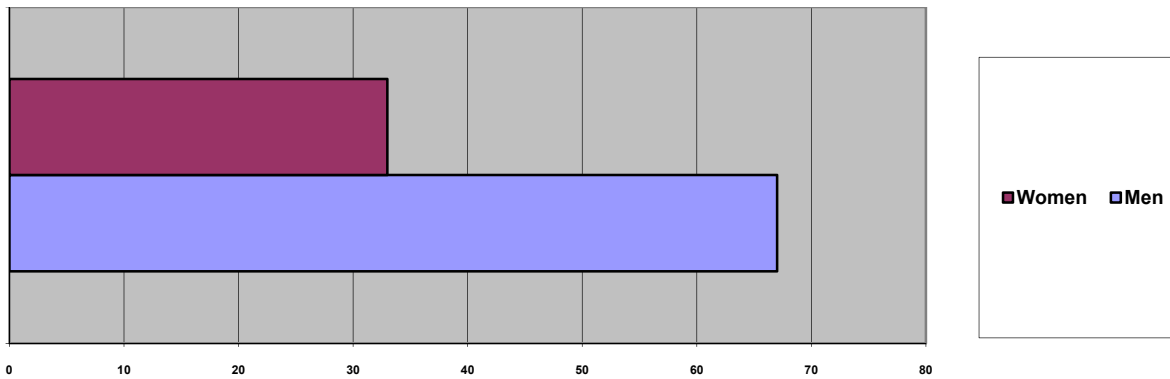
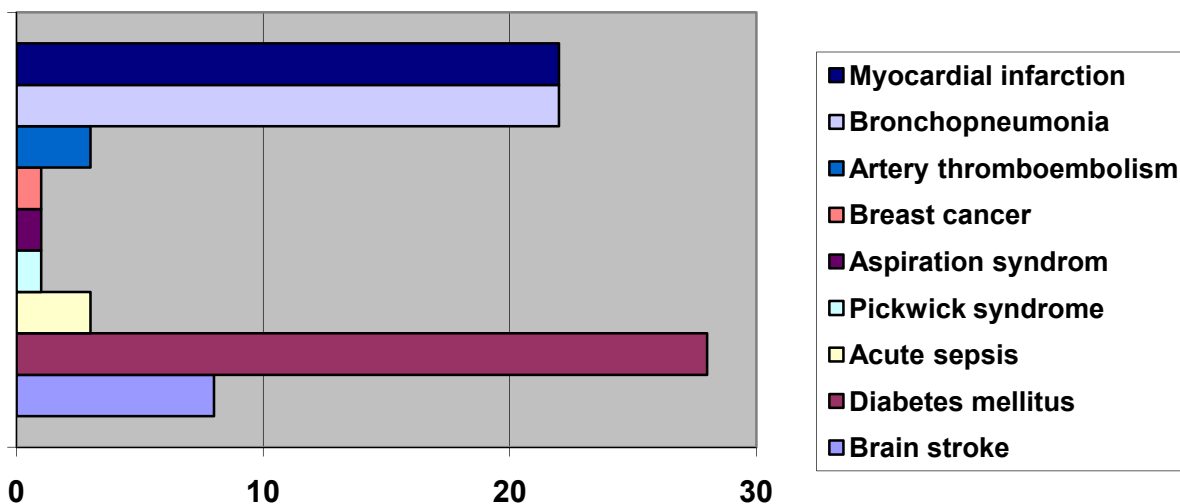


Fig.2



Associated disease have been sponged as: acute myocardial infarction, heart rhythm and conduction system disturbances in 22 cases, brain stroke had 8, diabetes mellitus 28, acute sepsis in 3, Pickwick syndrome 1, aspiration syndrome 1, breast cancer 1 case, pulmonary artery emboli 3 cases. Treatment problems mainly were appeared as bilateral bronchopneumonia, almost with every patient. The brain edema and hypoxic encephalopathy appeared nearly with each survivor (Fig.3).

Fig.3



After resuscitation state treatment standard included respiratory therapy realized as: moderate hyper-ventilation pattern, acid-base balance markers were supervised and strictly corrected, in most cases adrenal-reactive intravenous medications infusion should be used as well as water exchange and electrolyte supporting, antibacterial therapy, parenteral and enteral feeding about 28 - 45 Kcal/Kg /per 24 hr and etc. In addition to the State standard from 2008 year post-reanimation disease was treated with progenitor precursor committing therapy from the very first hours.

Common rate of lethality constitutes 67.4%: among women 33.44%, men 66,6% which exceeds lethality rate amid men twice as many.

Schedule #3

Intensive care duration	40-60 min	40-30 min	20-15 min
Number of the patients	23	10	16

The number of patient-days constituted 323 days. One patient was in a hospital for 115 days: he was in vegetative life and had lethal result. As for the survived patients, most long period of hospitalization was 25 days and it was followed by 15 days. Most of patients died in first 48 hours. The patient spent in a hospital 47 days died after base disease complications. Invalidity rate in survivors was not low: 6,7% were discharged in vegetation life and 93.3% with different versions of encephalopathy. The average patient-day number constitutes 6,7%, 3350 USD was spent on one patient, total treatment cost reached USD 24 000.

Conclusion

In 2005-2009 years in The Critical Care Medicine Institute the growth of the post-reanimation disease are shown. Most of patients had acute myocardial infarction and heart rhythm and conduction system disturbances. Majority of the patients die during first 48 hours, invalidity gained to 6,7% the middle number of patient-days was 6,7, one patient financial ensuring gained 3.500 USD. Ratio analyses show that high numbers of survived patients were reached by using therapy of progenitor precursor committing by side traditional treatment. The lethality quantities in patients that have no therapy of progenitor precursor committing steadily were left the same as before.

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პროგნოზული პრეკურსორების კომიტირება პოსტრეანიმაციული დაავადებისას.

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მოტანილია საქართველოს კრიტიკული მედიცინის ინსტიტუტში პოსტრეანიმაციული დაავადების მქონე ავადმყოფთა მკურნალობის შედეგები 2005-2009 წლებში. ნამკურნალებია 49 ავადმყოფი. ლეტალობამ შეადგინა 67,4%-ი, გადარჩენილთა რაოდენობა 32,6%, ხოლო საწოლ-დღეთა რაოდენობა 323 დღეა. პაციენტთა უმრავლესობას ჰქონდა მიოკარდიუმის მწვავე ინფარქტი, აგრეთვე გულის რითმისა და გამტარებლობის დარღვევა. ავადმყოფთა უმრავლესობა დაიღუპა პირველ 48 საათში, 6,7% დარჩა ინვალიდი, 93,3% კი ინვალიდობის გარეშე გაეწერა კლინიკადან. საწოლზე დაყოვნებამ შეადგინა 6,7 საწოლ-დღე, ხოლო ხარჯები ერთ პაციენტზე საშუალოდ 3 500 USD იყო. მიუთითებენ, რომ ლეტალობის დაბალი მაჩვენებლები და მკურნალობის სიიაფე გამომწვეული იყო მკურნალობის პროცესში პროგნოზული პრეკურსორების კომიტირების პროცესის მართვით, რომელიც მიმდინარეობდა ტრადიციული მკურნალობის პარალელურად შესაბამისი პატენტების (ზ.ხელაძე და თანაავტ., პატენტი №4857; ზ.ხელაძე და თანაავტ., პატენტი №4825; ზ.ხელაძე და ზ.ხელაძე პატენტი № 4858) მიხედვით.