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Memory and intellect assessment of critical patients.
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100 critical patients have been researched, 60 men, 40 women. The patients were divided into the groups of higher education and secondary education. The research was carried out in dynamic process, during the critical condition and after the liquidation of critical condition. 30 employees of clinic were in control group. The study shows that memory changes during critical condition have are obvious for short-term memory. Memory changes are more obvious for patients with secondary education and after liquidation of critical condition both short-term and long-term memories are improved. Intellectual abilities are also lowered during critical conditions and the level of lowering depends on the education of patient.

Key Words: Memory, Intellect Assessment, Critical Patients

Actuality: Critical condition is a special form of existing life, during which life is under danger and without special medical assistance it will have a lethal end in the nearest time period. Grave health condition, a fear of predictable death and despair has impact on patients' psychics. These changes are particularly compounded because of critical condition accompanied by brain hypoxia, respiratory failure and by other undesirable factors (caused by endogenous toxins). Patient's psychic is also influenced by an unusual environment that he/she is have to stay in, constant monitoring of vital functions, other patient's grave condition, different medications used during the treatment (sedative, pain killing, sleeping, anesthetic and other medicines). All this affects the results of treatment of critical patients. Unfortunately researches did not have place in this direction and nor anyone tried to study the psychological character of patients in critical medicine (Z. Kheladze2007). Thereby, this is the first study in this field. We studied the following from psychological conditions: Memory (imperative know as short-term and stabile, known as long-term) and intellect.

Materials and methods: 100 critical patients have been researched, 60 men and 40 women. 35 of them were under 60 and 65 of them were over 60 years old. 50 of them had secondary education and 50 of them had higher education. Their breath was held spontaneously, they were conscious. Memory and intellect assessment was carried out with special inquiry tests(The Great Encyclopedia of Psychological Tests,2012),

,There were patients with secondary education in first group and the second group with higher education patients. The patients were studied in dynamic process, during the critical conditions and after liquidation of critical periods.

30 employees of clinic, critical medicine doctors and nurses were studied as control group, while their work process. To estimate the short-term memory of respondent we offered 20 words to remember and after 30 seconds they had to name the remembered words. The assessment was carried out according to the number of remembered words, 0-4 was a bad result, 4-9 was

satisfactory, 9-15 was good and 15-20 was excellent result. Estimation of long-term memory was also carried out with unknown text specially drawn up for this purpose, This text was presented for one minute and after half an hour they should tell the content of the text. Remember text was evaluated in scores. 0-25 scores was bad result, 25-49 satisfactory, 50-74 good and 74-100 excellent. Intellect evaluation was also carried with special inquiry tests. which included questions from different fields of science, the test was presented once and time for answering the question was 10 minute. Each correct answer equaled 1 point. 15-20 points were high results, 10-14 were weak and 0-4 was low level of intellect. The data were processed by the methods variation statistics. The conversion coefficient was 99%.

Results and discussion: The results are presented as diagrams and charts.

Table #1. Memory study results (%)

N	Study results	Short-term memory	Long-term memory
1.	Bad results	20,0%	4,0%
2	Satisfactory	80.0%	25%
3	Good	–	52,0%
.4	Best	–	1,0%

Table #1 shows the results of short-term and long-term memory evaluation. From which we can see that 4 % of critical patients had bad results in long-term memory, which was 3 points. 25 % of them had satisfactory results (4 points), 52% good (6-7 points), and 1 % best (15 points), satisfactory in 80 % (65 points).

Table #2. Memory conditions in critical patients.

N	Research group:		Short-term memory	Long-term memory
1.	Critical Patient with higher education	$X \pm m$	$4,4 \pm 0.1$	$49,8 \pm 0,1$
2.	Critical Patients with secondary education	$X \pm m$ P1/2	$4,1 \pm 0.1$ P< 0.001	$46,6 \pm 0,1$ P< 0.001

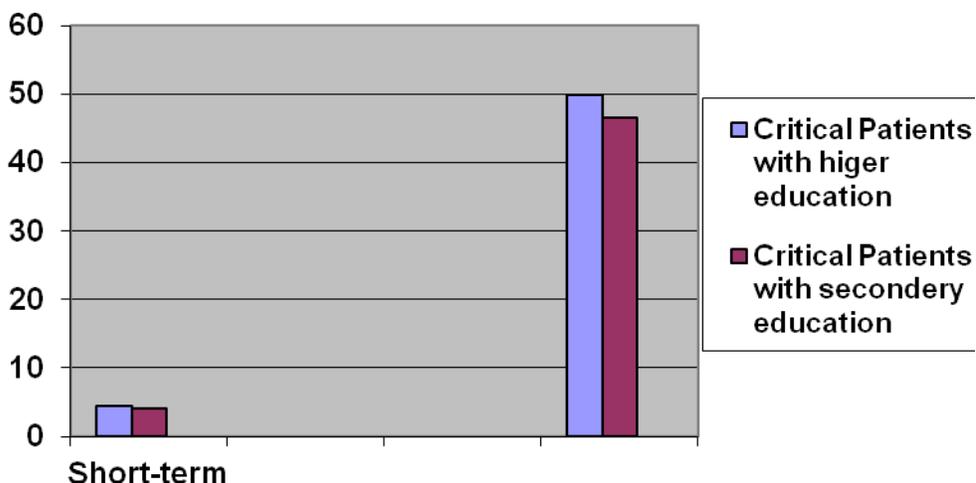


Table 2 and diagram shows the data about short-term and long-term memory in critical patients with higher and secondary education, these data show that patients with secondary education have sharped lowering of memory than the patients with higher education.

Table #3. Memory conditions in critical patients

Research group		Short-term memory	Long-term memory
Patients in critical condition	X ± m	4,5 ± 0.01	44,25±0,1
Patients after critical condition	X ± m P1/2	5,45 ± 0.1 P < 0.001	53,5±0,1 P < 0.001

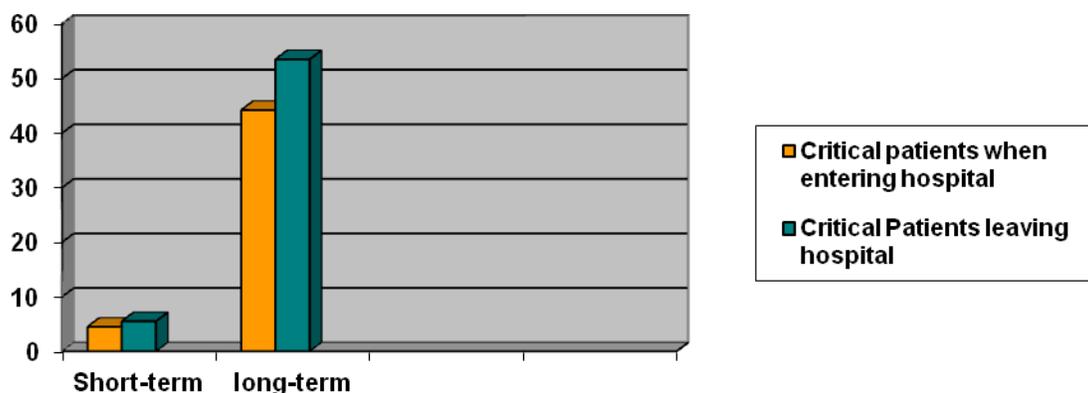


Table 3 and diagram show data of critical conditions and after critical conditions. You can see that both short-term and long-term memories had been improved after liquidation of critical conditions.

Table 4 Memory evaluation between patients and medical personnel

N	Research groups		Short-term memory	Long-term memory
1.	Critical medicine employees	X ± m	7,4 ± 0.1	80,8±0,1
2.	Critical Patients	X ± m P1/2	4 ± 0.1 P< 0.001	60±0,1 P< 0.001

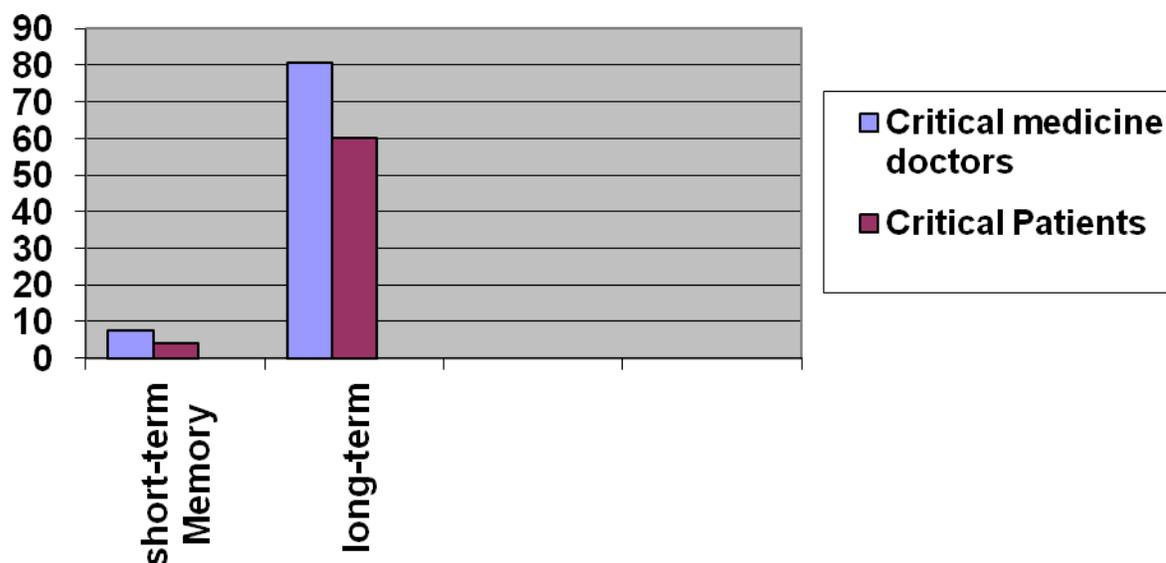


Table 4 shows data about long-term and short-term memories between medical personnel and critical patients. It's clear that both short-term and long-term memories are lowered in critical patients.

Tables 5. Intellectual condition in critical patients according to their education.

Research groups:		Intellect
Critical Patients with higher education	X ± m	3,44 ± 0.01
Critical Patients with secondary education	X ± m P1/2	3,02 ± 0.01 P< 0.001

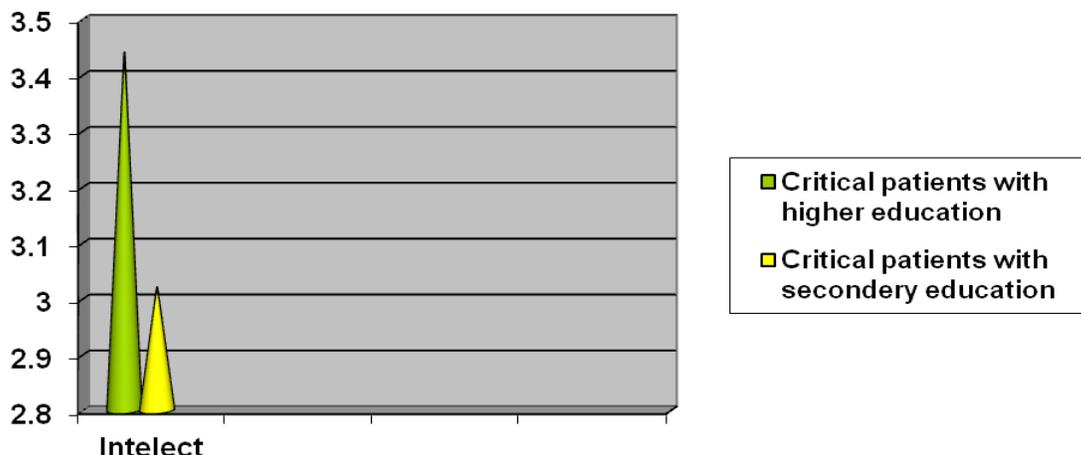


Table 5 shows data about intellect of critical patients. It is obvious that critical patients with higher education have weak level of intellect and patients with secondary education have bad level of intellect.

Conclusion

The study shows that memory changes during critical condition have are obvious for short-term memory. Memory changes are more obvious for patients with secondary education and after liquidation of critical condition both short-term and long-term memories are improved. Intellectual abilities are also lowered during critical conditions and the level of lowering depends on the education of patient.

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მეხსიერების და ინტელექტის შეფასება კრიტიკულ ავადმყოფებში
(თბილისი, საქართველო)

მეხსიერების ცვლილება კრიტიკულ მდგომარეობათა დროს უპირატესად წარმოდგენილია ხანმოკლე მეხსიერების დათრგუნვის სახით. კრიტიკულ მდგომარეობათა დროს ავადმყოფებს ასევე დათრგუნული აქვთ ინტელექტუალური შესაძლებლობები. კრიტიკული მდგომარეობის ლიკვიდაციის შემდეგ აღინიშნება, როგორც ხანმოკლე ისე ხანგრძლივი მეხსიერების, აგრეთვე ინტელექტუალური შესაძლებლობების აღდგენის ტენდენცია, მაგრამ მათი სრულყოფილი მოწესრიგება არ ხდება ხანგრძლივი დროის განმავლობაშიც კი.