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Studying of function and morphology of thyroid gland in critical patients.
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30 patients have been researched being in critical situation. All patient was of old aged persons, but critical situations were associating more frequently with destruction of blood circulation in brain. All patients have had accompanied diseases: sugar diabetic, hypertonic disease and other. In two patients has been developed stopping of heart, which has been restored by using of standard methods of reanimation of heart lung. Concentration of thyrotrophic hormone and free thyroxin. Also has been researched thyroid gland by ultrasound data, the results of research show, that in time of critical situation in critical patients of old – aged persons happens the activation of function of thyroid gland, which is registered on basis of normal erogeneity of thyroid gland and happens the activation of function of thyroid gland on basis of ecologically unchangeable structure.

Kew Words: thyroid gland, Critical Care, old persons

Intraduction: In the clinic of the critical medicine we meet two categories of patients by pathology of thyroid gland: the situations associated with pathology of thyroid gland belong to the first category, which (associated situations) are represented as thyreotoxic or hypothyroidism crisis. The patients belong to the second category, whose critical situation is conditioned by insults, infection, trauma and by situations dangerous for the life provoked by other similar reasons. In this case the function of thyroid gland may be changed as „second” in time of critical situation by influence of the changes (endogen cal hypoxia, toxemia and other) appeared in the organism in time of critical situation although by this point of view it is also important the role of those medicaments as glucocortikoydes, adrenomymetics and other kind. Also radiological, x- ray researches have the importance, which are also frequently used in process of the diagnosis of critical patients. Unfortunately in time of critical situations the function of thyroid gland is weakly studied, similar data do not exist about critical patients of old- aged persons, the existence of such information would become possible to make the clear correction in matter of the treatment of critical situation. It will importantly reduce the revelation of those complications which be conditioned by destruction of thyroid gland.

have been researched 30 patients – 15 women, 15 men being in critical situations the age of patients was hesitating from 70 to 92 years among them in 18 cases the critical situation has been associated with acute destruction of blood circulation in brain , in 13 cases ischemic and in 5 cases with hemorrhagic insult. The critical situation provoked by acute pneumonia has been marked in 6 patients, but the critical situation associated with complication of chronicle insufficiency of heart has been marked in 3 patients also all the patients as the complications have had the insufficiency of the respiration and blood circulation, but in two cases has been fixed the clinical death, this time there the spontaneous function of the heart has been restored by helping of standard reanimation measures. Also in all patients have had as accompanied diseases as there are hypertonic disease, sugar diabetic, and other chronicle disease. All the patients have been at

artificial respiration (GCS by Glasgow scale 3- 8 points), they were getting the change of water and electrolytes, correction of equilibrium of acid- alkali, antibiotic therapy, enteric feeding and other standard treatment measures. The study of function of thyroid gland happened in peripheral blood by definition of tire stimulated hormone (TSH) and free thyroxin (FT4). The research happened by immune fermented method, in research has been used XEMA medica (Russia) immune ferment tests. The registration of results happened on immune ferment rider of firm RAITO (china). Also happened the study of structure of thyroid gland by ultrasound method has been used myndray (china) apparatus. The research was producing by double blind methods, the results have been elaborated by method of variety statistic.

Results and discussion:Results of research are given as timetables and diagrams, it seems, that in critical patients the composition of free thyroxin was $1, 3 \pm 0, 01$, which statistically was faithfully low indicator comparatively to healthy persons on this basis in critical patients statistically was faithfully high concentration of thyrotrophic hormone ($3, 1 \pm 0, 01$ $P < 0, 001$) comparatively to healthy persons. All this indicates the activation of function of thyroid gland in critical patients at the age of old persons. It must be associated in critical patients with creation of certain complication (tachycardia, encephalopathy and other), that's why their prevention and treatment must be necessarily according to the prevision of function of thyroid gland.

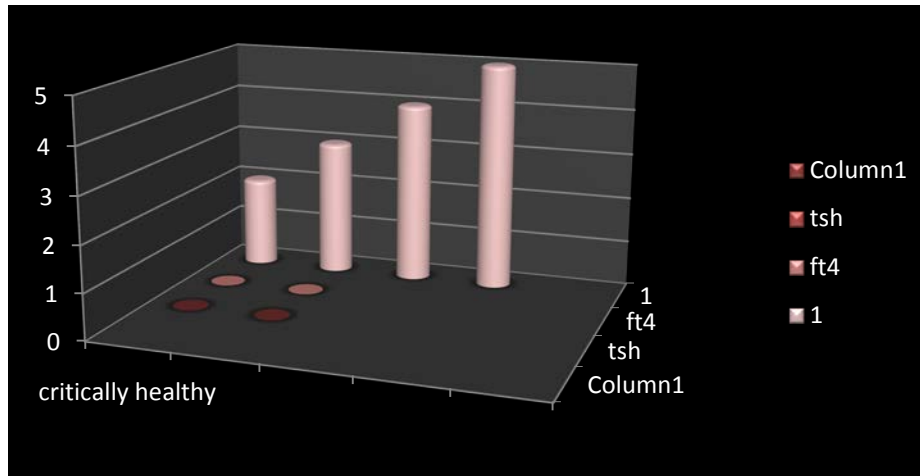
By ultrasound research has been established that in all cases the structure of thyroid gland was symmetric and homogenous, with normal echogenity and in both share with equal blood circulation. Its volume Was $17, 0 \pm 0, 61 \text{ m}^3$ in women, $24, 0 \pm 0, 41 \text{ m}^3$ in men which is within limits of the norm.

Timetable

Indicators of function of thyroid gland

N	Groups:	TSH my / ml		FT4 ng/ dl
1	Practically healthy persons	$1, 7 \pm 0, 01$	X + m	$1, 7 \pm 0, 01$
	Critical patients	$3, 1 \pm 0, 7$ $P < 0, 05$	X+ m P2 / 1	$1, 3 \pm 0, 01$ $P < 0, 01$

Diagram: Indicators of function of thyroid gland



Conclusion: In patients of old- aged person has been marked the activation of function of thyroid gland on basis of unchangeable structure.

Reference:

1. Z. Kheladze, „critical medicine “Tbilisi, Georgia 2007. 615 pages.

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ფარისებრი ჯირკვლის მორფოლოგიის და ფუნქციის შესწავლა კრიტიკულ
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გამოკვლეული იყო კრიტიკულ მდგომარეობაში მყოფი 30 მოხუცი ავადმყოფი. კრიტიკულ მდგომარეობები უფრო ხშირად ასოცირდებოდა თავის ტვინში სისხლის მიმოქცევის მოშლასთან. ყველა ავადმყოფს აღენიშნებოდა თანმხლები დაავადებები შაქრიანი დიაბეტის, ჰიპერტონული დაავადების და სხვათა სახით. მათგან ორ ავადმყოფს განუვითარდა გულის გაჩერება, რომელიც აღდგა გულ-ფილტვის რეანიმაციის სტანდარტული მეთოდების გამოყენებით. შესწავლილი იყო თირეოტროპული ჰორმონის და თავისუფალი თიროქსინის კონცენტრაცია. ასევე გამოკვლეული იყო ფარისებრი ჯირკვლის ექოგენური მონაცემები, კვლევის შედეგები უჩვენებენ რომ კრიტიკული მდგომარეობის დროს ადგილი აქვს ფარისებრი ჯირკვლის ფუნქციის გააქტიურებას, რომელიც რეგისტრირდება ფარისებრი ჯირკვლის ექოლოგიურად უცვლელი სტრუქტურის ფონზე.