

The Results of Studying Calcilate's Influence in Clinical-Biochemical Status of Human Organism

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Abstract

The tolerance and assimilability of the calcilate from meat and bone remnants contained in the diet in different amounts were studied under clinical condition in 38 males. The clinico-biochemical findings do not indicate calcilate has an adverse effect on the man.

Keywords: *calculates, ration of diet, practical feeding, substance changing, biochemical status*

Introduction

Calcium deficit is in a different group of population feed ration, in case to compare recommendation norm 10-30% [5,8,16].

The research problem of calcium new effect origin is more actual and is connected with normalization of not only mass help products mineral stuff, but possibility of forming medical and dietical products. One of the sources is the bone's cell of cattle and birds [3].

The best prophylaxis action of bone's preparation is known in treatment and prophylaxis diseases.

The useful action of bone-preparations is widely spread in diseases and practice, such as rachitic [6.14] to carry in the flour of bones, makes the stimulator of stomach secrecy, shows (displays) anti diabetic action [4.15], interrupts development of osteoporosis [11] reduces probability urethra concretions [9]. It gives satisfied result to add bones' flour in the ration of pregnant women [10]. It is designated to improve postnatal improvement [12] the operation of ayes crystal (cut-glass) reduces development of hemorrhage, if we give them the flour of blood's bones [7]. It is know that to

reduce calcium in blood often follows development of blood pressure [3].

Material and Methods

The new source of calcium may be waste of meat and bone, which is the second raw material of meat's remake. It is got of this worked out the medicine calculate method which is high 35% staff of mineral substance (between calcium 15,7% and albumen - 50%).

This preparation is approved by Tbilisi State Medical University's medicine technological chair and the contributor of Institute named by G. Natadze.

Medical biological researches showed the safeness of calcilate, which give us the chance to carry the estimation and observation of this prepeation by the taking part of healthy persons.

By this target it is studied 38 volunteers' feed's status in the rationally. We defined the substance of the calculation method [1].

<i>Indicators</i>	<i>Stuff</i>
Albumin (g)	83,8
Vegetable albumin (g)	33,8 (40,0)
Animal albumin (g)	50,0 (60,0)
Carbonitrates (g)	318,4
Fats (g)	79,0
Vegetable fats (g)	21,4 (27,0)
Animal fats	57,7 (73,0)
Calcium (mg)	530,0
Phosphorus (mg)	1305,0
Conform (Ca/P)	1:2,5
Energetical value (kcal)	2320,0

Tab.1 NHL of retroperitoneal cavity.

Results

As it seems from the *Tab.1*, albumin is 83 g; in volunteers' rationally, but carbohydrates - 318,4 g; fats 79,0 g; energetical value 2320 kkal.

It seems that it is lack of calcium, but it is not normal conform, which is 1:2,5.

The denoting circumstance indicates the breakance of the mineral change in the volunteer's organism.

At this breakance liquidation's target it was used albumen and mineral preparation calcilate by us.

We carried our observation clinical-biochemical and imunological status of human organism to study the influence of calcilate. 38 practically healthy people took part in this observation. This observation was continued for 20 days.

At the first stage during 10 days these persons were in diet №15, in which the main source of albumen represented bestial products (milk and milk products). On the second day they were in the same in which we changed the albumen and bestial products partly with 10% calcilates meat products.

In the volunteer's diet the sausages' products were characterized the next chemical indicators: (150g. sausage). Albumen - 12,1%; fat 30,0%; calcium - 166,0 mg; phosphorus - 217,0 mg %; Ca/P radio (1:1,29).

The volunteers were in usual regime in the period of the investigation.

At the period of observation we produced the medical control of healthy persons. We defined their organism's clinical-biochemical indicators. The blood's morphological composition, common albumen and albumen's fractions in the blood's serum - activity of aminotransferase, the stuff of the calcium and phosphorus, cholesterol, kreatinine, glucose, urinacid [2,4,11]. The results of observation are in the *Tab.2*.

As it seems the blood's morphological staff doesn't change in the first and second periods. There it is not differences statistically in common albumen and albumen's fractions indicators in the blood's serum, in the aminotransferase activate means, changes' last products.

To bring in calcilate in the list of the volunteers is assisted in their organism to normalizate such important physiological indicators, as it is the staff of calcium and phosphorus in the blood.

At the period of the observation the composition of calcium is 0:38 (1.7:2,5), where in the last period the staff of phosphorus is being diminishing and their ratio was 0,78 (1:1,28) which is in normal compasses physiologically Ca/P (1:1,0-1,5).

Conclusions

So it is decided that calcilate doesn't influence in negative on the human organism and phosphorus.

The received results take us basis, that calcilate would be used in medical and prophylactic Target.

<i>Indicators</i>	<i>Origin data</i>	<i>Observation</i>	
		I	II
Hemoglobin (g/l)	143,0±3,0	146,7±1,3	145,0±3,0
Erythrocytes (10/l)	4,4±0,1	4,5±0,2	4,5±0,04
Leukocytes (10/l)	7,0±0,5	6,9±0,2	7,2±0,2
Common albumen (g/l)	83,7±4,1	88,0±4,4	84,3±4,2
Albumins (%)	53,3±1,8	57,0±2,8	55,0±2,0
Globulins (%)	46,7±2,3	42,3±2,1	45,0±2,2
The action of aninaminotranspherase (ml.g.s.)	0,65±0,1	0,60±0,1	0,68±0,1
The action of aspartataminotranskinase (ml.g.s.)	0,49±0,09	0,45±0,05	0,40±0,05
Koieaterine (m.l.g.s.)	0,49±0,25	4,8±0,2	4,7±0,3
Triglitseryds (m.m./l.)	0,63±0,03	0,62±0,05	0,61±0,04
Gardovana (m.m./l.)	5,9±0,2	5,7±0,3	5,5±0,2
Urine acid (m.m./l.)	0,36±0,02	0,38±0,04	0,37±0,03
Creatinin (m.m./l.)	0,78±0,03	0,76±0,02	0,77±0,04
Glucose (m.m./l.)	5,1±0,1	5,0±0,1	4,9±0,2
Calcium (m.g%)	3,6±0,3	3,7±0,1	5,7±0,1*
Phosphorus (m.g%)	9,4±0,1	9,3±0,1	7,3±0,1*
Ratio Ca/P	0,38	0,40	0,78

*The difference between beginning dates is statistical trustworthy (P<0,005).

Tab.2 *Clinical-biochemical indicators of the volunteers' blood.*

References

1. Нестерин М.Ф., Скурухин И.М. Химический состав пищевых продуктов. М., 1989.
2. Ронин В.С., Старобинец Т.М., Утевский И.Л. Руководство по практическим занятиям по методам клинических лабораторных исследований. М.: 1987.
3. Соломатин Л.Д., Епихина А.М., натарова Л.В. Основы тенденции развития мясной промышленности США и Западной Европы. ЦНИИ ТЭИ, Пищепром. М., 1989.
4. Словак З.А., Семенова А.М. Лаб. дело, 1989, N10, С. 19-20.
5. Шицкова А.П. Метаболизм кальция и его роль в питании детей. М., 1989.
6. Chen W., Anderson J., Jening D. Proc. Soc., Exp. Biol. (N.Y.). 1989. v. 175, N2, p. 215-218.
7. Cook J. Brit J. Nutre, 1987, v. 36, p. 20-28.
8. Dkonski D. Journal Nutr., 1987, v. 102, p. 1133-1135.
9. Dodson P., Пасу P. Diabetologia, 1989, v. 27, p. 522-526.
10. Gerham J., Peckham J. J. Amer. Vet. ASS., 1989, v. 156, p. 9-12.
11. Jekins D., Reynolds D., Leads A. Lancet, 1988, N2, p. 1116-1117.

12. Ma T., Mckinley J. Microchim. Acta, 1989, N4. p. 15-20.
13. Monver L. J. Ann. Diabet., 1989, N17, p. 299-309.
14. Tassam-Jones C., Holloway W., Bull. Rpy. Soc., 1987, v.7, N2, p. 91-93.
15. .Plenk H., Rudas B.J. Pervodent., Res., 1988. v.8, p. 106-108.
16. Whippe G. Amer J. Med. Sci., 1992, v. 203, N4, p. 477-479.

Результаты изучения влияния кальцилата на клинико-биохимический статус человека

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Р Е З Ю М Е

С целью определения влияния кальцилата на клинико-биохимический статус организма человека проведено 20-суточное обследование с 38 практически здоровых мужчин. Исследование подразделено на два последовательных периода, в которых испытуемые получали изокалорийные рационы, содержащие 10 г кальцилата (в контрольной группе - без него). Установлено отсутствие отрицательного влияния кальцилата на организм человека.

Ключевые слова: *кальцилат, рацион питания, фактическое питание, обмен веществ, биохимический статус*