



Indicators of Activity of Serum Aminotransferases in Persons with Increased Body Weight

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Received 2nd Jul 2022,
Accepted 3rd Aug 2022,
Online 5th Sep 2022

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Abstract: Recently, physicians in practice, for the most part, have begun to face the fact of an increase in the activity (mainly minimal) of serum transaminases: alanine - and aspartate aminotransferases (ALT, AST), often without any clinical signs of disease. Now interest in this biochemical phenomenon has grown to a disturbing level, primarily due to the scale of its distribution, which, at the same time, has led to its growing relevance.

This article is devoted to the study of the features of increasing the activity of ALT, AST of blood serum in individuals with different gradations of body weight gain (BMT). These areas are relatively young in science and often their importance remains underestimated by most specialists. The main goal is to study the parameters of the activity of ALT, AST of blood serum in individuals with different gradations of weight gain.

This work presents the results of studying the indicators of the activity of ALT, AST of blood serum in individuals with different gradations of increase in body weight.

Key words: Serum aminotransferases, ALT, AST, increased body weight, transaminasemia, subtransaminosemia.

Introduction

The surge in the problem of transaminasemia is still largely due to the growth of the technical potential for its detection (1,2,3,5,6,8,9,). Recently, the study of the content of ALT and AST in the blood serum has been included in the list of mandatory screening routine tests (10,11,15,16,17). Of course, the facts of identifying the growth of ALT and AST activity have sharply increased, and at the same time, the problems of their competent interpretation (18,19,20,21,22,23).

According to modern concepts, ALT and AST indicators are considered as a biochemical indicator (4,7,12,13,14,25). Increased levels of transaminase activity in practice are called by different, but close in meaning terms (24,26,27,29,28). Even at the level of a cursory analysis of the glossary of

phraseology, a circle of the most frequently used terms is immediately outlined, consisting mainly of the following: transaminasemia, hypertransaminasemia, hyperenzymemia or hyperalatemia and hyperasatemia. In terms of meaning, they are all similar and therefore have equal chances for their regular use with any increase in the content of transaminases (30,31,32,33,34).

It should be emphasized that for these terms, not only the semantic closeness is common, but also a drawback, expressed in the limited information, in terms of exhaustive coverage of the level of transaminasemia. Consequently, the forming impressions in the course of their application are hardly associated with the severity of the cytolysis syndrome (CS). In our opinion, the existing phraseological flaw unreasonably underestimates the informative possibility of transaminase indicators from the one that they actually deserve at that time (35,37,36,38). To overcome this shortcoming, the level of transaminasemia began to be divided into separate gradations with a clear delineation of their range. The innovation certainly increased the information capacity of transaminases. Thanks to this, the diagnostic value of transaminase indicators has become much more refined, hence even more informative.

Purpose of the work: to study the indicators of the activity of ALT, AST in blood serum in individuals with different gradations of body weight gain (BWG).

Materials and Methods

Under observation were 56 persons aged 26 to 46 years, of which 26 people were female. For inclusion in the survey group, the main conditions were the presence of high values of the body mass index (BMI) according to Quetelet: from 25 to 30 with low and moderate health risks, the absence of comorbid conditions associated with obesity. The study group did not include persons suffering from various liver pathologies, diabetes mellitus, muscular dystrophy, with a marker of viral hepatitis, taking various drugs (hormones, NSAIDs, antivirals) and alcoholic beverages in especially large quantities, pregnant women. On the eve of this study, all participants used modern diagnostic methods (ultrasound, in some cases, computed tomography, etc.) in order to exclude latent variants of the course of diseases. Also, the biochemical parameters of the functional potential of the liver were studied. All examined, depending on the type of BMG, were divided into the following groups: the first of them included persons with a central (android), and the second - with a peripheral (gynoid) type of body weight gain. The surveyed groups were representative in terms of BMI values, gender and age indicators.

Results

It was found that in 11 (20%) individuals with high BMI values, the levels of serum aminotransferases, especially ALT, were increased. Of the total number of 11 persons, 3 were females, and the remaining 8 were males. The level of increase in serum aminotransferases ranged from 1.5N to 2N, which corresponded to the minimum gradation of the generally accepted scale of transaminasemia. It should be pointed out that this name is far from professional in form and, moreover, each time it should be added to the term transaminasemia, which creates additional stylistic inconvenience. It's time to rename it with a term, already at the level of visual familiarity, which makes it possible to judge the severity of transaminasemia. Based on this, we propose our own version of the renaming of this level of transaminasemia. We consider it more appropriate to call it "subtransaminasemia" (ST), since at the level of empirical acquaintance with the term, a specific idea of the magnitude of the increase in the activity of ALT and AST begins to be associated.

Analysis of the structure of ST showed that in 7 persons the BMI category corresponded to moderate, and in the remaining 4 to low health risk. In 6 cases of ST with a moderate BMI gradation, there was a central type of obesity. Also, in 2 cases with a low BMI category, an android variant of obesity was noted. Of the total number of 11 cases of ST, 8 were in persons with central, only 3 with peripheral

type of obesity. This fact once again emphasizes the relationship of ST with the type of obesity. In all 11 cases of ST, the ALT fraction was high. The AST fraction was higher than the control values only in 9 cases.

Thus, on the basis of the conducted studies, it should be concluded that in individuals with a high BMI value, fluctuating within the low and moderate health risk category, there is an increase in the activity of ALT and AST, in advance of the appearance of clinical and instrumental signs of liver diseases associated with the metabolic syndrome. At the same time, the most obvious shifts are observed in the indicators of ALT activity. The increase in the activity of serum aminotransferases was to a certain extent dependent on the type of obesity and was much more pronounced in its central forms. The revealed fact allows us to recommend this biochemical phenomenon as an indicator indicating the onset of possible parenchymal structural transformations in the liver, developing as weight gain progresses.

Literature

1. Ibragimovna K. O. Competence of Quantitative Indicators of the Leading Clinical Signs of Cholestasis in Differentiation of its Grades //Indonesian Journal of Innovation Studies. – 2022. – T. 18.
2. IZ Aslonova O.I.Khodiyeva Assessment of the incidence of iron deficiency Anemia among Women ASIANJOURNAL OF MULTIDIMENSIONAL RESEARCH 10(5) 453-457.2021
3. Dilnavoz A. R. Assessment of the expression of endothelial dysfunction in chronic heart failure in female patients //Assessment. – 2021. – T. 44. – №. 05.
4. Адизова Д. Р. СУРУНКАЛИ ЮРАК ЕТИШМОВЧИЛИГИ МАВЖУД БЕМОРАЛДАРДА ДЕПРЕССИВ БУЗИЛИШЛАРИНИНГ ТАРҚАЛИШИ //ЖУРНАЛ НЕВРОЛОГИИ И НЕЙРОХИРУРГИЧЕСКИХ ИССЛЕДОВАНИЙ. – 2022. – Т. 3. – №. 1.
5. Адизова Д. Р. и др. Положительное влияние торсида при хронической сердечной недостаточности у женщин с артериальной гипертензией //ПРОТИВОРЕЧИЯ СОВРЕМЕННОЙ КАРДИОЛОГИИ: СПОРНЫЕ И НЕРЕШЕННЫЕ ВОПРОСЫ. – 2015. – С. 164-165.
6. OI Hodiyeve INDICATORS OF ACTIVITY OF SERUM AMINOTRANSFERASES IN PERSONS WITH INCREASED BODY WEIGHT Web of Scientist: International Scientific Research Journal 3 (6), 1866-1872
7. Gadaev A.G., Xalilova F.A., Elmurodov F.X., Tosheva X.B. Structural and functional changes in the kidneys and heart in patients with XSN. Therapy Bulletin of Uzbekistan. 2018. -1 - S. 100-104.
8. K.F. Abdusalolovna. Assessment of Intracardiac Hemodynamics and Electrolyte Balance in Various Hemodynamic Types of Chronic Heart Failure Accompanied By Anemia // European Multidisciplinary Journal of Modern Science 7,63-71, 2022
9. Tosheva Khakima Bekmurodovna, Erkinova Nigora Erkinovna, Gadaev Abdigaffar Gadaevich, Djuraeva Nozima Oripovna, Khalilova Feruza Abdusalolovna (2020) Comorbid States in Patients with Chronic Heart Failure. Regional Level of the Problem (Preliminary Study). Journal of Cardiovascular Disease Research, 11 (2), 59-65.
10. Tosheva Kh., Xalilova F., Gadaev A., Erkinova N., Djuraeva N. Impact Of Chronic Heart Failure On Comorbidities In Hot Climates On The Quality Of Life And Clinical Condition Of Patients. European Journal of Molecular & Clinical Medicine. ISSN 2515-8260 Volume 07, Issue 10, 2020.

11. Khalilova F. A. et al. COMORBIDE CASES IN CARDIORENAL SYNDROME AND ITS IMPACT ON PATIENTS'QUALITY OF LIFE //EDITOR COORDINATOR. – 2020. – С. 741.
12. Aslonova I. J. et al. The prevalence of chronic pyelonephritis in women with disturbed tolerance for glucose //Asian Journal of Multidimensional Research (AJMR). – 2019. – Т. 8. – №. 11. – С. 81-85.
13. Aslonova I. Z., Erkinova N. E., Tosheva K. B. The prevalence of chronic pyelonephritis in women with disturbed tolerance for glucose //International Journal of Pharmaceutical Research. – 2019. – Т. 11. – №. 4. – С. 866-868.
14. Тошева Х., Кайимова Д. И. Метаболик синдромнинг ривожланишида ирсиятнинг ахамияти //Биология и интегративная медицина. – 2017. – Т. 1. – С. 132.
15. Клычева М. А. и др. Роль психологии семейного воспитания в формировании поведенческих реакций у подростков //Наука молодых–Eruditio Juvenium. – 2015. – №. 2. – С. 75-79.
16. Bkmurodovna T. K., Chorievich Z. A. Study of frequency indicators of comorbid states at different functional classes of heart failure //ACADEMICIA: An International Multidisciplinary Research Journal. – 2021. – Т. 11. – №. 3. – С. 2556-2560.
17. Bkmurodovna T. K. et al. Comorbid States in Patients with Chronic Heart Failure. Regional Level of the Problem (Preliminary Study) //Journal of Cardiovascular Disease Research. – 2020. – Т. 11. – №. 2. – С. 59-65.
18. Bkmurodovna T. K., Gadaevich G. A. Dynamics of Renal Fibrosis Markers on the Basis of Complex Treatment in Chronic Heart Failure with Anemia. – 2021.
19. Khaidarovich K. U., Bkmurodovna T. H., Abduszhililovna K. F. Studying The Frequency Of The Symptoms Of Gastroesophageal Reflux Disease //JournalNX. – С. 48-52.
20. Тошева Х. Б., Кенжаева З. О. Пропаганда здорового образа жизни в селе как механизм сохранения здоровья сельского населения. – 2014.
21. Тошева Х., Кайимова Д. И. Role of heritable factors in development of the metabolic syndrome //Биология и интегративная медицина. – 2017. – №. 1. – С. 132-146.
22. Гадаев А. Г. и др. Роль некоторых маркеров в оценке течения Хронического кардиоренального синдрома. – 2018.
23. Нурбаев Ф. Э., Тошева Х. Б. Скрининг Сердечно-Сосудистых Заболеваний У Спортсменов //CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES. – 2021. – С. 8-9.
24. Тошева Х., Хазратов У., Нарзиев Ш. РОЛИ ДИСФУНКЦИИ ПОЧЕК В РАЗВИТИИ КОМОРБИДНОСТИ У БОЛЬНЫХ С ХРОНИЧЕСКОЙ СЕРДЕЧНОЙ НЕДОСТАТОЧНОСТЬЮ //Журнал вестник врача. – 2020. – Т. 1. – №. 3. – С. 93-96.
25. Khotamova R. S. Frequency of Comorbid Conditions in Chronic Heart Failure //Middle European Scientific Bulletin. – 2022. – Т. 24. – С. 260-264.
26. Khotamova R.S. The Role of Folk Medicine in the Treatment of Patients with Cardiovascular Diseases // Central Asian Journal of Medical and Natural Science (ISSN:2660-4159) Oct. 14, 2021. Page: 280-283.
27. Гафуровна А.Н. (2022). Симуляционное обучение как метод современных технологий в медицинской практике студентов медицинских вузов. Среднеевропейский научный бюллетень , 24 , 276-280.

28. Ашурова Нодира Гафуровна, Эркинова Нигора Эркиновна РОЛЬ СИМУЛЯЦИОННОГО ОБУЧЕНИЯ В ФОРМИРОВАНИИ ПРОФЕССИОНАЛЬНОЙ КОМПЕТЕНТНОСТИ СТУДЕНТОВ МЕДИЦИНСКИХ ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЙ // ORIENSS. 2021. №5.
29. Ашурова Н.Г. (2016). О натуре лекарственных средств в древневосточной медицине. Биология и интегративная медицина, (2), 189-199.
30. Ашурова Нодира Гафуровна (2020). Прополис и современные медикаменты. Биология и интегративная медицина, (2 (42)), 140-156.
31. Ашурова Нодира Гафуровна, & Эркинова Нигора Эркиновна (2021). РОЛЬ СИМУЛЯЦИОННОГО ОБУЧЕНИЯ В ФОРМИРОВАНИИ ПРОФЕССИОНАЛЬНОЙ КОМПЕТЕНТНОСТИ СТУДЕНТОВ МЕДИЦИНСКИХ ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЙ. Oriental renaissance: Innovative, educational, natural and social sciences, 1 (5), 234-242.
32. Ашурова Нодира Гафуровна и Хазифа Хикматовна Тухтаева. (2021). РОЛЬ СИМУЛЯЦИОННОГО ОБУЧЕНИЯ В ФОРМИРОВАНИИ ПРОФЕССИОНАЛЬНОЙ КОМПЕТЕНЦИИ СТУДЕНТОВ МЕДИЦИНСКОГО ВУЗА. Academicia Globe: Inderscience Research , 2 (6), 303–307.
33. Orifovna, D. N. (2021). Comparative Characteristic of the use of Glucose-Containing Drugs in A Complex and Separate with Diabetes Mellitus Associated with Chronic Renal Pathology. CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES, 393-396.
34. Kholov, G. A., & Djuraeva, N. O. (2022). EVALUATION OF CARDIOSPIRATORY INDICATORS ON THE BASIS OF COMPLEX TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE WITH PULMONARY HYPERTENSION. Art of Medicine. International Medical Scientific Journal, 2(1).
35. Холов, Г. А., Кенжаев, М. Л., Ганиев, У. Ш., Джураева, Н. О., & Абдижалилова, С. И. (2015). Роль ранних признаков ремоделирования сердца в прогнозе хронической обструктивной болезни легких. Наука молодых–Eruditio Juvenium, (1), 56-67.
36. Холов, Г. А., Ганиев, У. Ш., & Джураева, Н. О. (2015). Влияния кардиоселективных бета-блокаторов на эндотелиальную функцию у больных хронической обструктивной болезнью легких. Наука молодых–Eruditio Juvenium, (2), 33-45.
37. Kodirova, Nargizakhon Umarovna (2022). MODERN METHODS OF TREATMENT OF CHRONIC LUNG DISEASES. Oriental renaissance: Innovative, educational, natural and social sciences, 2 (Special Issue 4-2), 983-988.
38. Умаровна, К. Н. (2022). Современные Методы Лечения Хронических Заболеваний Легких. CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES, 3(4), 179-182.