

NOALKOGOL JIGAR YOG'LI KASALLIGIDA SERAMID DARAJASINING LIPID SPEKTRI VA JIGAR ZARARLANISHI KO'RSATKICHLARI BILAN O'ZARO BOG'LIQLIGI

Nasirdinov Murodjon Adahamjon o'g'li

Andijon davlat tibbiyot instituti, Oilaviy shifokorlarni tayyorlash kafedrası assistenti

Salohiddinov Zuhridin Salohiddinovich

Andijon davlat tibbiyot instituti,

Oilaviy shifokorlarni tayyorlash kafedrası mudiri, tibbiyot fanlari doktori, professor

<https://doi.org/10.5281/zenodo.21973362>

Mavzuning dolzarbligi

Noalkogol jigar yog'li kasalligi (NJYK) rivojlanishida lipid almashinuvi buzilishlari markaziy o'rin tutadi, biroq an'anaviy lipid spektri ko'rsatkichlari kasallikning og'irlik darajasini yetarlicha aks ettirmaydi. Sfingolipidlar metabolizmining oraliq va signal mahsuloti bo'lgan seramidning boshqa lipid fraksiyalari hamda jigar zararlanishining instrumental va biokimyoviy belgilari bilan o'zaro munosabatini aniqlash kasallik patogenezi chuqurroq tushunish va lipid tekshiruvlarining diagnostik qiymatini oshirish imkonini beradi.

Tadqiqot maqsadi

Noalkogol jigar yog'li kasalligi bilan og'rigan bemorlarda seramid darajasining lipid spektri komponentlari, jigar fermentlari hamda steatoz va fibroz darajasi bilan o'zaro bog'liqligini baholash.

Material va usullar

Tadqiqotga 84 nafar shaxs — nazorat guruhi (n=29), jigar steatozi guruhi (n=28) va noalkogol steatogepatit guruhi (n=27) jalb etildi. Barcha tekshiriluvchilarda och qoringa umumiy xolesterin, triglitseridlar, yuqori va past zichlikdagi lipoproteinlar (YuZLP, PZLP), alaninaminotransferaza (ALT) va aspartataminotransferaza (AST) darajalari hamda qon zardobidagi seramid konsentratsiyasi aniqlandi. Jigar yog'lanishi va fibrozi tranzient elastografiya usulida baholandi. Bog'liqlik Spearman korrelyatsiya koeffitsiyenti orqali o'rganildi.

Olingan natijalar

Kasallik guruhlarida nazorat guruhiga nisbatan seramid, umumiy xolesterin, triglitseridlar va PZLP darajalari ishonchli yuqori, YuZLP darajasi esa pastroq bo'ldi (barcha ko'rsatkichlar bo'yicha $p < 0,001$). Xususan, triglitseridlar nazorat guruhida $1,36 \pm 0,33$ mmol/l ni tashkil etgan bo'lsa, steatoz guruhida $2,72 \pm 0,88$ va steatogepatit guruhida $2,95 \pm 0,82$ mmol/l ga yetdi; YuZLP mos ravishda $1,34 \pm 0,12$ dan $0,99 \pm 0,09$ va $1,01 \pm 0,09$ mmol/l gacha pasaydi.

Korrelyatsion tahlil seramid darajasi bilan jigar steatozi darajasi o'rtasida kuchli musbat bog'liqlik borligini ko'rsatdi ($r = 0,743$; $p < 0,001$). Seramid darajasi fibroz bosqichi bilan ham o'rtacha-kuchli bog'liqlikka ega bo'ldi ($r = 0,654$; $p < 0,001$). Instrumental ko'rsatkichlar bilan taqqoslanganda seramid steatoz ko'rsatkichi (CAP) bilan $r = 0,618$ ($p < 0,001$), jigar qattiqligi ko'rsatkichi bilan esa $r = 0,490$ ($p < 0,001$) darajasida bog'liq bo'ldi. Jigar fermentlari orasida seramid AST bilan kuchsiz, ammo ishonchli bog'liqlik namoyon qildi ($r = 0,273$; $p = 0,044$), ALT bilan bog'liqlik esa ahamiyatli bo'lmadi ($r = 0,198$; $p = 0,147$).

Xulosa

Noalkogol jigar yog'li kasalligida seramid darajasining oshishi aterogen dislipidemiya bilan birga kechadi va jigar yog'lanishi hamda fibrozlanishining instrumental ko'rsatkichlari

bilan kuchli bog'liq bo'ladi. Seramidning steatoz va fibroz darajasi bilan bog'liqligining an'anaviy lipid ko'rsatkichlari va transaminazalarga nisbatan yuqoriroq bo'lishi uni kasallik og'irligini aks ettiruvchi qo'shimcha ko'rsatkich sifatida o'rganish zarurligini asoslaydi.

Adabiyotlar, References, Литературы:

1. Pagadala M., Kasumov T., McCullough A.J., Zein N.N., Kirwan J.P. Role of ceramides in nonalcoholic fatty liver disease // *Trends in Endocrinology and Metabolism*. – 2012. – Vol. 23, No. 8. – P. 365–371.
2. Carlier A., Phan F., Szpigel A., Hajduch E., Salem J.E., Gautheron J. et al. Dihydroceramides in triglyceride-enriched VLDL are associated with nonalcoholic fatty liver disease severity in type 2 diabetes // *Cell Reports Medicine*. – 2020. – Vol. 1, No. 9. – Article 100154.
3. Luukkonen P.K., Zhou Y., Sädevirta S., Leivonen M., Arola J., Orešič M. et al. Hepatic ceramides dissociate steatosis and insulin resistance in patients with non-alcoholic fatty liver disease // *Journal of Hepatology*. – 2016. – Vol. 64, No. 5. – P. 1167–1175.
4. Ooi G.J., Meikle P.J., Huynh K., Earnest A., Roberts S.K., Kemp W. et al. Hepatic lipidomic remodeling in severe obesity manifests with steatosis and does not evolve with non-alcoholic steatohepatitis // *Journal of Hepatology*. – 2021. – Vol. 75, No. 3. – P. 524–535.
5. Denimal D., Béland-Bonenfant S., Pais-de-Barros J.P., Rouland A., Bouillet B., Duvillard L. et al. Plasma ceramides are associated with MRI-based liver fat content but not with noninvasive scores of liver fibrosis in patients with type 2 diabetes // *Cardiovascular Diabetology*. – 2023. – Vol. 22. – Article 310.
6. Maldonado-Hernández J., Saldaña-Dávila G.E., Piña-Aguero M.I., Núñez-García B.A., López-Alarcón M.G. Association between plasmatic ceramides profile and AST/ALT ratio: C14:0 ceramide as predictor of hepatic steatosis in adolescents independently of obesity // *Canadian Journal of Gastroenterology and Hepatology*. – 2017. – Vol. 2017. – Article 3689375.