

**EKSPERIMENTAL GIPOTIREOZDA AMINOTRANSFERAZALAR
MIQDORINING O'ZGARISHI VA FLAVONOIDLAR BILAN
KORREKSIYALANISHI**

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**CHANGE OF AMINOTRANSFERASES IN EXPERIMENTAL
HYPOTHYROIDISM AND CORRECTION WITH FLAVONOIDS**

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Annotatsiya. Tibbiyotda qo'llanilib kelinayotgan dorivor moddalarning orasida o'simliklardan ajratib olingan biologik faol birikmalarning ahamiyati katta bo'lib, bular yuqori fiziologik faollikka egaligi bilan tavsiflanadi. Turli patologiyalarni oldini olishda, davolashda va samarali farmakologik preparatlarni yaratishda o'simliklardan ajratib olingan biologik faol birikmalar katta ahamiyatga ega hisoblanadi. Shu jihatdan bugungi kunda asosiy e'tibor, o'simlik moddalarining yangi dorivor avlodlarini izlash va ularning fiziologik va biokimyoviy ta'sir mexanizmlarini o'rganishga qaratilmoqda. Mazkur maqolada gipotireoz sharoitida kalamush qoni tarkibida aminotransferalar miqdorining o'zgarishi va sumax hamda beh o'simliklaridan olingan flavonoidlar yordamida korreksiyalash natijalari yoritiladi.

Kalit so'zlar: gipotireoz, ALT, AST, sumax, beh, flavonoidlar.

Abstract. Among the medicinal substances used in medicine, biologically active compounds isolated from plants are of great importance, which are characterized by having high physiological activity. Biologically active compounds isolated from plants are considered of great importance in the prevention, treatment and creation of effective pharmacological preparations of various pathologies. In this respect, the main focus today is the search for new medicinal generations of plant substances and the study of their mechanisms of physiological and biochemical action. In this article, under the conditions of hypothyroidism, the results of changes in the amount of aminotransferases in rat blood and correction using flavonoids from sumax and beh plants are highlighted.

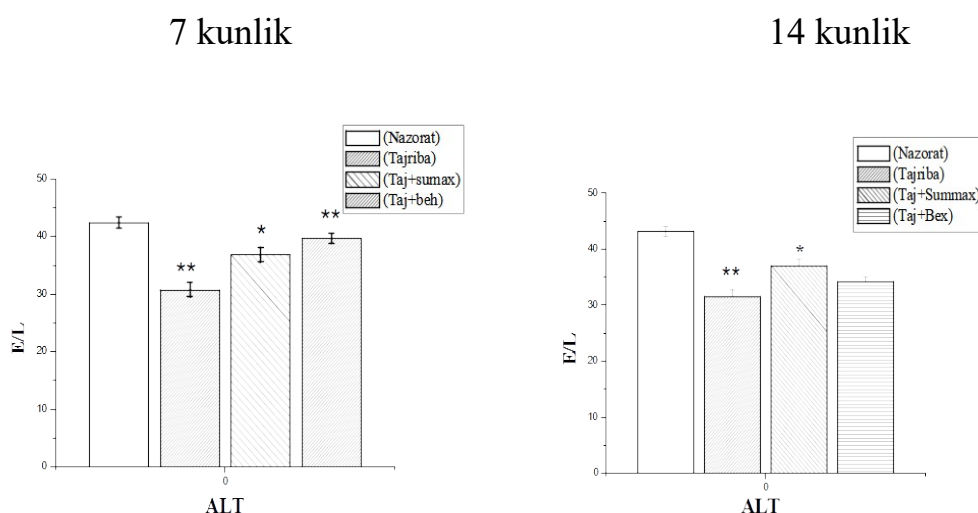
Keywords: hypothyroidism, ALT, AST, sumax, beh, flavonoids.

Alaninaminotransferaza (ALT) va aspartataminotransferaza (AST) fermentlari aminotransferazalar hisoblanadi va gipotireozda mazkur fermentlarning qonda ko'payib ketishi kuzatiladi. Lekin kasallikning dastlabki bosqichlarida ALT miqdori qonda kamayib keyinchalik orta boshlaydi. Bu holat gepatotsitlarning yemirilishi va hujayra membranasi buzilishi natijasida fermentlarning hujayradan qonga chiqishi natijasida yuz beradi. ALT va AST fermentlari miqdorining ortishi, hujayra o'limi natijasida plazmatik membrana yemirilish mexanizmi isbotlangan bo'lsada, lekin buning yana boshqa mexanizmlari ham bo'lishi mumkin degan taxminlar mavjud. Ulardan biri ma'lum kasallik davrida hujayra tashqarisidagi mikrovezikulalar va ekzosomalarda oqsil sintezi jadallashuvi bo'lib, lekin bu haqida yetarli ma'lumotlar mavjud emas [2].

Materiallar va metodlar. Tadqiqot hayvonlarida gipotireoz modelini chaqirish uchun merkazolil preparatidan foydalanildi. Tajriba guruhlariga gipotireoz kasali chaqirish maqsadida 21 kun davomida merkazolil tabletkasi (5mg/100g tana massaga) peroral usulda berildi [3]. Qon zardobda alanin aminotransferaza faolligi yagona Reytmann-Frenkel usuli bilan aniqlandi. Alanin aminotransferaza (ALT) fermenti ta'sirida transaminatsiya natijasida aminokislotalar alanindan α -ketoglutaratga o'tadi. ALT faolligi ishqoriy muhitda hosil bo'lgan piruvat

dinitrofenilgidrazonlar miqdoriga mutanosib bo‘lib, kolorometrik usulda aniqlandi [1].

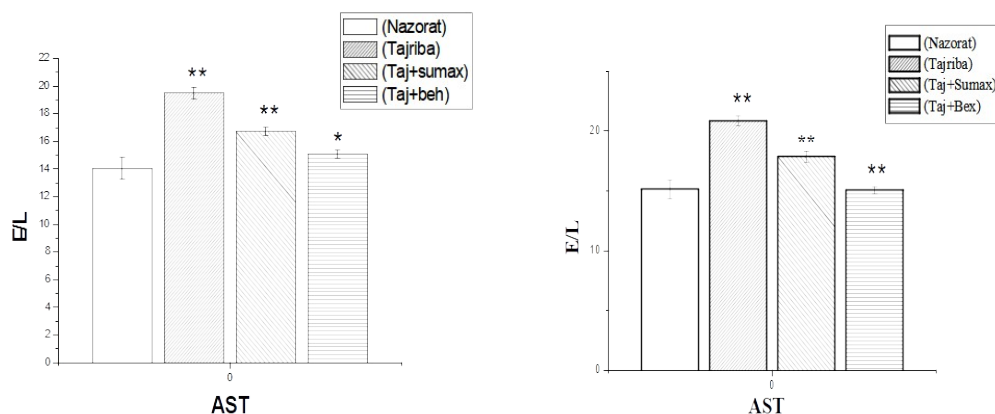
Natija va muhokamalar. Tajriba davomida gipotireozning dastlabki bosqichlarida ALT miqdorining pasayishi va AST fermenti miqdori oshib ketishi aniqlandi. Ya’ni, nazorat guruhida ALT fermenti miqdori 42.46 ± 0.94 bo‘lsa, gipotireoz sharoitida esa, 1,38 martaga tushdi (1-rasm). AST fermenti esa nazorat guruhida 14.05 ± 0.78 bo‘lsa, gipotireozda 1.4 martaga oshishi kuzatildi (2-rasm). 7 kun davomida sumax flavonoidi berilgan guruhda ALT miqdori, 20% ga tiklangan bo‘lsa, beh flavonoidi berilgan guruhda 28% ga tiklanganligi kuzatildi (1-rasm). AST miqdori esa, sumax flavonoidi berilgan guruhda, 14% ga, tiklangan bo‘lsa, beh o‘simligi flavonoidi berilgan guruhda 28% ga pasayganligi aniqlandi (2-rasm).



1-rasm. Gipotireoz sharoitida qonda ALT fermenti miqdorining o‘zgarishi va flavonoidlar bilan korreksiyalash (I guruh, nazorat, II guruh, tajriba: gipotireoz, III guruh, gipotireoz+sumax (32 mg/kg), IV guruh, gipotireoz+beh (40 mg/kg); $M \pm m$; $n=5$;) (Izoh: * $p < 0.05$, ** $p < 0.01$)

7 kunlik

14 kunlik



2-rasm. Gipotireoz sharoitida qonda AST fermenti miqdorining o'zgarishi va flavonoidlar bilan korreksiyalash (I guruh, nazorat, II guruh, tajriba: gipotireoz, III guruh, gipotireoz+sumax (32 mg/kg), IV guruh, gipotireoz+beh (40 mg/kg); $M \pm m$; $n=5$;) (Izoh: * $p < 0.05$, ** $p < 0.01$) 14 kun davomida sumax o'simligi flavonoidi berilgan guruhda ALT miqdori, 17,3 % ga tiklangan bo'lsa, beh o'simligi flavonoidi berilgan guruhda 8,4% ga tiklandi (1- rasm). AST miqdori esa, sumax o'simligi flavonoidi berilgan guruhda, 14 % ga, beh flavonoidi berilgan guruhda 23 % ga kamayganligi aniqlandi.

Xulosa. Sumax va beh o'simliklaridan ajratib olingan flavonoidlar gipotireoz sharoitida qon zardobida aminotransferaza fermentlari miqdoriga korreksiyalovchi ta'sir qilishi *in vivo* tajribalarda birinchi marta aniqlandi. Antioksidant faollikka ega bo'lgan sumax va beh o'simliklari flavonoidlari mos ravishda tana vazniga nisbatan 32 mg/kg, 40 mg/kg dozada gipotireoz modelidagi kalamushlarga berilganda, kalamush qonida ALT va AST fermentlari miqdori tiklanishi aniqlandi.

Adabiyotlar

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