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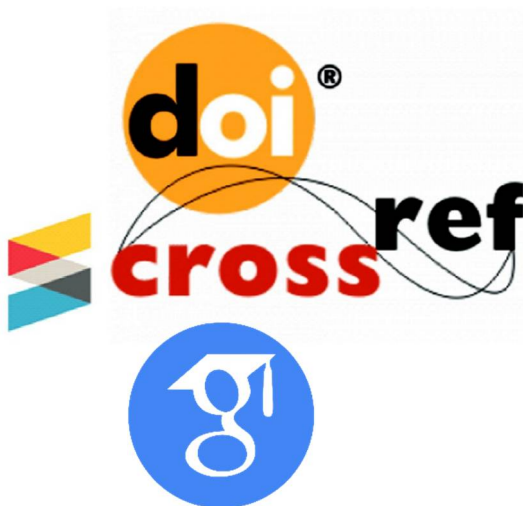
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БИМЕДИЦИНА ВА АМАЛИЁТ ЖУРНАЛИ

ЖУРНАЛ БИМЕДИЦИНЫ И ПРАКТИКИ | JOURNAL OF BIOMEDICINE AND PRACTICE

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STUDY OF CHANGES IN THE COMPOSITION OF FOOD INGREDIENTS AND CALORIC CONTENT OF BREAST MILK IN WOMEN WITH ANEMIA

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The study involved 241 women with various degrees of iron-deficiency anemia (IDA): Grade I – 132, Grade II – 84, and Grade III – 25 individuals. The degree of IDA was determined based on hemoglobin levels, red blood cell count, serum iron levels, total iron-binding capacity (TIBC), and latent iron-binding capacity (LIBC).

Among breastfeeding mothers with Grade I anemia, a category of women was identified who exhibited a decrease in the content of proteins, fats, carbohydrates, and the caloric value of breast milk.

Women with Grade II anemia showed a significant reduction in the nutrient content and caloric value of breast milk. This reduction was more pronounced in the group of women over 30 years old, who had given birth 3 or more times, and had been breastfeeding for over 6 months. In such cases, the energy value of breast milk is maintained primarily due to carbohydrates.

Women with Grade III severe anemia exhibited a sharp decrease in nutrient content and caloric value across all groups. This can lead to nutrient and energy deficiencies in infants, as well as contribute to the development of nutritional insufficiency.

Keyword: iron-deficiency anemia, caloric, milk, energy

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ANEMIYALI AYOLLAR SUTIDAN OLINGAN OZIQ-OVQAT INGREDIYENTLAR VA KALORIYA QIYMATINING O'ZGARISHLARI**ANNOTATSIYA**

Anemiyali ayollarning sutidagi oziq-ovqat ingrediventlari va kaloriya qiymatning o'zgarishlari.

Bizning kuzatuvimiz ostida temir tanqislik anemiyasining (TTA) turli darajalari bo'lgan 241 nafar ayol bo'ldi: I daraja – 132; II daraja – 84 va III daraja – 25 kishi. TTA darajasi gemoglobin miqdori, eritrotsitlar soni, qondagi zardob temir miqdori, umumiy temir bog'lovchi qobiliyati (UTBQ) va latent temir bog'lovchi xususiyati (LTBX) ko'rsatkichlari asosida aniqlangan.

I darajali anemiyaga ega emizikli onalar orasida ona sutining tarkibida oqsillar, yog'lar, uglevodlar va kaloriya miqdorining kamayishi kuzatiladigan ayollar toifasi mavjud.

II darajali anemiyaga ega ayollarda esa ona suti tarkibidagi oziq moddalarning va kaloriyaning sezilarli darajada kamayishi ro'y beradi. Bu kamayish 30 yoshdan oshgan, 3 va undan ortiq marta tug'gan hamda 6 oydan ortiq emizayotgan ayollar guruhida yanada yaqqol namoyon bo'ladi. Bunday hollarda ona sutining energiya qiymati asosan uglevodlar hisobiga saqlanib turadi.

III darajali og'ir anemiyaga ega ayollarda esa barcha guruhlarda oziq moddalarning va kaloriya qiymatining keskin pasayishi kuzatiladi. Bu esa bolalarda oziq modda va energiya yetishmovchiligiga olib keladi hamda alimentap tanqislik holatlarining rivojlanishiga sabab bo'lishi mumkin.

kalit so'zlar: anemiya, sut, kaloriya, energiya, temir

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ИЗУЧЕНИЕ ИЗМЕНЕНИЙ СОСТАВА ПИЩЕВЫХ ИНГРЕДИЕНТОВ И КАЛОРИЙНОСТИ ГРУДНОГО МОЛОКА У ЖЕНЩИН С АНЕМИЕЙ**АННОТАЦИЯ**

Исследование изменений состава пищевых ингредиентов и калорийности грудного молока у женщин с анемией. В исследовании приняли участие 241 женщина с различными степенями железодефицитной анемии (ЖДА): I степень – 132, II степень – 84 и III степень – 25 человек. Степень ЖДА определялась на основе показателей уровня гемоглобина, количества эритроцитов, уровня сывороточного железа, общей железосвязывающей способности (ОЖСС) и латентной железосвязывающей способности (ЛЖСС).

Среди кормящих матерей с анемией I степени выявлена категория женщин, у которых наблюдается снижение содержания белков, жиров, углеводов и калорийности грудного молока.

У женщин с анемией II степени отмечается значительное снижение содержания питательных веществ и калорийности грудного молока. Это снижение более выражено в группе женщин старше 30 лет, родивших 3 и более раз и кормящих грудью более 6 месяцев. В таких случаях энергетическая ценность грудного молока сохраняется в основном за счет углеводов.

У женщин с III степенью тяжелой анемии наблюдается резкое снижение содержания питательных веществ и калорийности во всех группах. Это может привести к дефициту питательных веществ и энергии у детей, а также способствовать развитию алиментарной недостаточности.

Ключевые слова: анемия, молоко, калория, железо, энергия

So‘nggi yillarda olib borilgan tadqiqot natijalari MDH mamlakatlarida emizikli ayollarning sog‘ligi va ularning nutriyent holatining juda xavotirli darajada ekanligini ko‘rsatmoqda. Ularning ovqatlanish rejimi ko‘plab oziq-ovqat ingrediylentlari bo‘yicha nomutanosib va yetishmovchilik holatida bo‘ladi [3], bu esa emizuvchi onalarda gipogalaktiya — ya‘ni sut ishlab chiqarilishining kamayishiga olib keladi [2, 4, 6]. Bu holat ona suti tarkibining o‘zgarishiga, xususan, oqsil, yog‘, uglevod, vitamin va minerallar miqdorining kamayishiga sabab bo‘ladi.

S.M. Maltsev va hamkorlari [5,8] tomonidan o‘tkazilgan tadqiqotlarga ko‘ra, emizuvchi ayollarning 28–60 foizida turli darajadagi vitaminlar va mikroelementlar yetishmovchiligi aniqlangan. Ayniqsa, A, D, E, C, B guruh vitaminlari, shuningdek, temir, rux, mis, magniy kabi mikroelementlarning past darajada bo‘lishi qayd etilgan. Tadqiqotda, yetilgan ona sutidagi oqsil miqdori past — 0,88–0,99 g/100 ml ni tashkil etgani aniqlangan. Bu esa chaqaloqlarning oqsil bilan ta‘minlanishini kamaytirib, ularning o‘shish va rivojlanish sur‘atiga bevosita ta‘sir qiladi.

Hududiy jihatdan ham muammo bir xil darajada dolzarbdir. Masalan, Prioaral (Orolbo‘yi) mintaqasidagi anemiyali ayollar orasida olib borilgan tadqiqotlarda ham shunga o‘xshash ko‘rsatkichlar kuzatilgan [1,9]. Bu hududlarda yashovchi ayollar orasida temir tanqisligi anemiyasi keng tarqalgan bo‘lib, ularning katta qismi laktatsiya davrida organizm resurslarining keskin kamayishi va ovqatlanishdagi nomutanosiblik tufayli kuchayib boradi.

Bundan tashqari, anemiyali ayollarda oziq-ovqat ingrediylentlari (oqsillar, yog‘lar va uglevodlar) miqdorini optimal darajada saqlashda bevosita ishtirok etuvchi gidrolitik fermentlarning faolligi sezilarli darajada pasayishi aniqlangan [7,10]. Bu esa, o‘z navbatida, modda almashinuvining buzilishiga, sutni tarkibida energiya va ozuqa moddalari yetishmovchiligiga olib keladi. Natijada, chaqaloqlar ona suti orqali to‘liq miqdorda zarur moddalarga ega bo‘la olmaydi, bu esa neonatal davrda turli xil oziqaviy tanqislik holatlarini, xususan, temir tanqisligi anemiyasi, kam vaznlik va immunitetning pasayishini yuzaga keltiradi.

Shu munosabat bilan, emizikli ayollarda, ayniqsa anemiyadan aziyat chekayotganlarda, ona suti tarkibini chuqur tahlil qilish, uning oqsil, yog‘, uglevod va energiya qiymatini aniqlash ilmiy va amaliy ahamiyat kasb etadi. Bunday tadqiqotlar nafaqat ona va bola salomatligini mustahkamlashga, balki laktatsiya davrida to‘g‘ri ovqatlanish strategiyalarini ishlab chiqish va anemiyani oldini olish chora-tadbirlarini takomillashtirishga xizmat qiladi.

Tadqiqot maqsadi: anemiyali ayollarning sutidagi oziq-ovqat ingrediylentlari va kaloriya qiymatning o‘zgarishlari.

Materiallar va usullar

Bizning kuzatuvimiz ostida temir tanqislik anemiyasining (TTA) turli darajalari bo‘lgan 241 nafar ayol bo‘ldi: I daraja – 132; II daraja – 84 va III daraja – 25 kishi. TTA darajasi gemoglobin miqdori, eritrotsitlar soni, qondagi zardob temir miqdori, umumiy temir bog‘lovchi qobiliyati (UTBQ) va latent temir bog‘lovchi xususiyati (LTBX) ko‘rsatkichlari asosida aniqlangan.

Nazorat guruhi sifatida 30 sog‘lom emizikli ona tanlangan. Shu bilan birga, onalarning yoshi, tug‘ruq soni, laktatsiya davri va kunlik sut miqdori (KSM) hisobga olingan. Suttagi oqsillar, yog‘lar va uglevodlar miqdori Dombrovskiy Ya.Yu. va hamkorlari (1986) usuliga ko‘ra aniqlangan.

Tadqiqot natijalari va muhokamasi

Anemiyali ayollarning sutidagi oziq-ovqat ingrediylentlari miqdori jadvalda keltirilgan. Ma‘lumotlaridan ko‘rinib turibdiki, I darajadagi anemiyadan aziyat chekayotgan ayollarda oziq-ovqat ingrediylentlari miqdorida sog‘lom ayollar bilan solishtirganda statistik farq aniqlanmadi ($P>0,05$), ammo sutning energetik qiymati sezilarli darajada kamaygan edi ($P<0,05$). II va III darajadagi anemiyaga chalingan ayollarda sut tarkibidagi oqsillar ($P<0,05-0,001$), yog‘lar ($P<0,05-0,001$) va uglevodlar ($P<0,05-0,01$) miqdori sezilarli darajada kamaygan.

Energetik qiymatdagi asosiy “yo‘qotish” oqsillar (15,7% va 30,9%, $P<0,01$) va yog‘lar (8,0% va 22,5%, $P<0,01$) hisobiga yuzaga kelgan, uglevodlar hisobidan esa kamroq (4,5% va 5,46%, $P<0,05$) bo‘lib, bu II va III darajadagi anemiya og‘irlik darajalariga mos keladi.

Shuningdek, anemiya og‘irlik darajasi ortishi bilan oqsillar va yog‘larning kaloriyali qiymati kamayadi, uglevodlarning kaloriyali qiymati esa nisbatan oshadi ($P<0,01$; $P<0,01$; $P<0,05$). Bu, sog‘lom ayollar (1:2,7:6,1) va I darajadagi anemiyali ayollar (1:2,8:6,4) bilan solishtirganda, II (1:2,9:6,9) va III darajadagi anemiyali (1:3,0:8,3) ayollarning sutidagi uglevodlar nisbati ortgani bilan tasdiqlanadi.

Anemiyadan aziyat chekayotgan ayollarning yoshiga, tug‘ruq soniga (paritetiga) va laktatsiya davriga qarab ona suti (OS) tarkibi tahlil qilindi. Tadqiqot natijalari shuni ko‘rsatdiki, anemiyaning I darajasi bilan og‘rigan ayollarning OS tarkibi ko‘p hollarda sog‘lom ayollarnikidan farq qilmaydi. Biroq, 6 oydan ortiq laktatsiya davrida ularning sutida oqsil miqdori kamayganligi aniqlangan ($11,3\pm0,14$ g/l, $R<0,05$), 6 oygacha bo‘lgan davrda esa bu ko‘rsatkich $11,7\pm0,12$ g/l ni tashkil etgan.

Yog‘ miqdori 30 yosh va undan katta ayollarda pasaygan ($30,3\pm1,02$ g/l), bu esa 21–29 yoshdagi anemiyali ayollardagi ($32,9\pm0,48$ g/l) ko‘rsatkichga nisbatan past. Shuningdek, 3 va undan ortiq tug‘ruqli ayollarda yog‘ miqdori ($31,4\pm0,74$ g/l, $R<0,05$) 1–2 tug‘ruqli ayollarnikiga ($33,0\pm0,44$ g/l) qaraganda kamaygan.

Shunga muvofiq, anemiyaning I darajasi bilan og‘rigan ayollarda OSning umumiy kaloriyaviy qiymati ham kamaygan: 6 oydan ortiq laktatsiyada ($635,7\pm3,5$ kkal/l, $R<0,05$), 30 yosh va undan katta ayollarda ($627,8\pm5,77$ kkal/l) hamda 3 yoki undan ortiq tug‘ruqli ayollarda ($638,1\pm4,93$ kkal/l). Taqqoslash uchun, 6 oygacha laktatsiyada ($654,4\pm2,99$ kkal/l), 21–29 yoshda ($653,7\pm3,05$ kkal/l) va 1–2 tug‘ruqli ayollarda ($648,0\pm2,34$ kkal/l) bu qiymatlar yuqoriroq bo‘lgan.

Ushbu yetishmovchiliklar natijasida anemiyaning I darajasidan aziyat chekayotgan ayollarda oziq moddalarning oqsil/yog‘/uglevod (O/Y/U) nisbatida sezilarli o‘zgarishlar aniqlangan: 30 yosh va undan katta ayollarda (1:2,7:6,5), 3 va undan ortiq tug‘ruqli ayollarda (1:2,8:6,5) hamda 6 oydan ortiq laktatsiyada (1:2,8:6,4). Taqqoslash uchun, 21–29 yoshdagi ayollarda (1:2,83:6,51), 1–2 tug‘ruqli ayollarda (1:2,84:6,5) va 6 oygacha laktatsiyada (1:2,7:6,5) bu nisbat deyarli o‘zgarmagan.

Shuningdek, ular orasida asosiy oziq moddalarning energiyaviy ulushi ham mutanosib emasligi kuzatilgan: 30 yosh va undan katta ayollarda (7,4:45:48,2), 3 va undan ortiq tug‘ruqli ayollarda (7,5:46,0:47,04) va 6 oydan ortiq laktatsiyada (7,8:46,0:47,0%) bo‘lgan, sog‘lom ayollarda esa bu nisbat (7,6:46,4:46,0%) va adabiyotlarda keltirilgan me‘yor (8,0:47,0:45,0%) sifatida qayd etilgan.

Jadval 1. Anemiyaning og‘irlik darajasiga qarab ona suti tarkibidagi asosiy oziq moddalarning o‘zgarishi

Ko‘rsatkich	Sog‘lom ayollar / nazorat	I darajali anemiya	II darajali anemiya	III darajali anemiya
Oqsil miqdori	me‘yorida	Sog‘lom ayollarga nisbatan statistik farq aniqlanmagan ($P>0,05$)	Sezilarli kamaygan ($P<0,05-0,001$)	Keskin kamaygan ($P<0,001$)
Yog‘ miqdori	me‘yorida	Statistik farq aniqlanmagan ($P>0,05$)	Sezilarli kamaygan ($P<0,05-0,001$)	Keskin kamaygan ($P<0,001$)
Uglevod miqdori	me‘yorida	Statistik farq aniqlanmagan ($P>0,05$)	Sezilarli kamaygan ($P<0,05-0,01$)	Nisbatan saqlangan, ammo ayrim guruhlarda pasaygan
Sutning umumiy energetik qiymati	me‘yorida	Sezilarli kamaygan ($P<0,05$)	Sezilarli kamaygan ($P<0,05-0,001$)	Keskin kamaygan ($P<0,001$)

Ko'rsatkich	Sog'lom ayollar / nazorat	I darajali anemiya	II darajali anemiya	III darajali anemiya
Energiya kamayishining asosiy sababi		Asosan umumiy kaloriyaning pasayishi	Asosan oqsil va yog'lar hisobiga	Asosan oqsil va yog'lar hisobiga, uglevodlar ulushi nisbatan ortgan
Oqsil hissasining kamayishi		aniq emas	15,7% gacha	30,9% gacha
Yog' hissasining kamayishi		aniq emas	8,0% gacha	22,5% gacha
Uglevod hissasining kamayishi		aniq emas	4,5% gacha	5,46% gacha
O/Y/U nisbati	1:2,7:6,1	1:2,8:6,4	1:2,9:6,9	1:3,0:8,3
Xulosa		Tarkib deyarli saqlangan, ammo kaloriyaviy qiymat pasaygan	Sut tarkibidagi barcha asosiy oziq moddalarning tanqisligi shakllangan	Sut tarkibining eng og'ir buzilishi, energiya yetishmovchiligi chuqurlashgan

Izoh: II–III darajali anemiyada sutning kaloriyaviy qiymatidagi yo'qotish asosan oqsil va yog'lar hisobiga yuzaga kelgan, uglevodlarning nisbiy hissasi esa oshgan.

Demak, anemiyaning I darajasidan aziyat chekayotgan emizikli ayollar, ayniqsa 30 yoshdan katta, bir necha marotaba tug'ruq qilgan va uzoq muddatli laktatsiya davrida bo'lganlarda, ona suti tarkibida oqsil va yog' miqdori kamaygan, umumiy energiya qiymati pasaygan hamda oziq moddalarning muvozanati buzilgan.

II darajali anemiyadan aziyat chekayotgan ayollarda ona suti (OS) tarkibida oqsil, yog', uglevod va umumiy kaloriya miqdori kamayganligi ($R < 0,05$ – $0,001$) aniqlangan bo'lib, bu nazorat guruhi ayollarining ko'rsatkichlariga (mos ravishda 12,1 g/l; 32,5 g/l; 73,2 g/l va 652,0 kkal/l) nisbatan pastdir.

Oqsil, yog', uglevod va kaloriyalar bo'yicha sezilarli tanqislik, ayniqsa, 30 yosh va undan katta yoshdagi emizikli ayollarda ($10,1 \pm 0,26$ g/l, $R < 0,01$; $28,5 \pm 1,37$ g/l, $R < 0,01$; $72,9 \pm 0,48$ g/l, $R > 0,05$; $605,4 \pm 6,2$ kkal/l, $R < 0,01$), 3 va undan ortiq tug'ruqli ayollarda ($9,7 \pm 0,22$ g/l, $R < 0,001$) hamda 6 oydan ortiq laktatsiya davrida ($19,8 \pm 0,19$ g/l, $R < 0,001$; $28,5 \pm 0,55$ g/l, $R < 0,01$; $71,4 \pm 0,54$ g/l, $R < 0,01$; $596,1 \pm 3,55$ kkal/l, $R < 0,01$) aniqlangan.

Jadval 2. II–III darajali anemiyada ona suti tarkibining yosh, paritet va laktatsiya davomiyligiga qarab o'zgarishi

Anemiya darajasi	Guruh	Oqsil, g/l	Yog', g/l	Uglevod, g/l	Kaloriya, kkal/l	O/Y/U nisbati yoki energiya ulushi	Asosiy tavsif
Nazorat	Sog'lom ayollar	12,1	32,5	73,2	652,0	1:2,6:6,1	Me'yoriy ko'rsatkichlar
II darajali anemiya	Umumiy guruh	kamaygan	kamaygan	kamaygan	kamaygan	8,0% : 47,0% : 45,0%	Barcha asosiy oziq moddalar va

Anemiya darajasi	Guruh	Oqsil, g/l	Yogʻ, g/l	Uglevod, g/l	Kaloriya, kkal/l	O/Y/U nisbati yoki energiya ulushi	Asosiy tavsif
							kaloriyaning kamayishi
II darajali anemiya	30 yosh va undan katta	10,1±0,26*	28,5±1,37*	72,9±0,48	605,4±6,2**	6,84% : 45,8% : 49,4%; O/Y/U = 1:3,0:7,2	Oqsil va yogʻ kamaygan, uglevod ulushi ortgan
II darajali anemiya	3 va undan ortiq tugʻruq	9,7±0,22**	—	—	—	6,65% : 44,4% : 48,9%; O/Y/U = 1:3,0:7,4	Eng yaqqol oqsil tanqisligi
II darajali anemiya	Laktatsiya >6 oy	9,8±0,19**	28,5±0,55*	71,4±0,54*	596,1±3,55*	6,74% : 44,2% : 49,4%; O/Y/U = 1:3,0:7,5	Uzoq laktatsiyada tanqislik kuchayadi
III darajali anemiya	30 yosh va undan katta	7,96***	24,3***	—	546,0***	oqsil 5,48%; yogʻ 41,4%	Oqsil va yogʻning keskin kamayishi
III darajali anemiya	3 va undan ortiq tugʻruq	7,56***	24,1***	—	542,5***	oqsil 5,71%; yogʻ 41,3%	Kaloriyaning chuqur pasayishi
III darajali anemiya	Laktatsiya >6 oy	7,55***	23,9***	—	532,5***	oqsil 5,82%; yogʻ 41,7%	Eng ogʻir metabolik tanqislik
III darajali anemiya	20 yoshgacha / 21–29 yosh / birinchi tugʻruq	—	—	—	—	oqsil 6,24–6,38%; yogʻ 41,6–43,3%	Hatto nisbatan yosh va kam tugʻruqli guruhlarda ham energiya tanqisligi kuzatiladi

Belgilar:

*P<0,05; **P<0,01; ***P<0,001.

Qisqa xulosa:

- II darajali anemiyada ona sutida oqsil, yogʻ, uglevod va kaloriyaning sezilarli kamayishi kuzatiladi.
- Bu kamayish ayniqsa 30 yoshdan katta, 3 va undan ortiq tugʻruqli hamda 6 oydan ortiq emizayotgan ayollarda yaqqol namoyon boʻladi.

- **III darajali anemiyada** esa barcha guruhlarda sutning oziqaviy va energetik qiymati keskin pasayadi.

Shunga muvofiq, II darajali anemiyali emizikli ayollarda asosiy oziq moddalarning (oqsil/yog'uglevod) kaloriya nisbatlari ancha kamaygan (8,0%, 47,0%, 45,0%), ayniqsa 30 yoshdan katta (6,84%, 45,8%, 49,4%), 3 va undan ortiq tug'ruqli (6,65%, 44,4%, 48,9%) hamda 6 oydan ortiq laktatsiya davridagi (6,74%, 44,2%, 49,4%) ayollarda. Shu bilan birga, ularning sutidagi kaloriya qiymati oqsil va yog'lar hisobiga kamaygan, ammo uglevodlar hisobiga ortgan. Bu holat 30 yoshdan katta ayollarda (1:3,0:7,2), 3 va undan ortiq tug'ruqli (1:3,0:7,4) hamda 6 oydan ortiq laktatsiya davridagi ayollarda (1:3,0:7,5) oqsil/yog'uglevod nisbatining oshgan uglevod ulushi bilan tasdiqlangan bo'lib, bu nazorat guruhidagi ko'rsatkichlardan (1:2,6:6,1) farq qiladi.

III darajali anemiyali ayollarda barcha guruhlarda oqsil va yog' miqdori keskin kamaygan, natijada sutning umumiy energiya qiymati ham kamaygan ($R<0,01-0,001$). II darajali anemiyali ayollardagi kabi, III darajada ham sut tarkibidagi tanqislik asosan oqsil (7,96; 7,56; 7,55 g/l, $R<0,001$), yog' (24,3; 24,1; 23,9 g/l, $R<0,001$) va energiya (546,0; 542,5; 532,5 kkal/l, $R<0,001$) miqdorining kamayishi bilan bog'liq bo'lgan. Bu ko'rsatkichlar 30 yosh va undan katta, 3 va undan ortiq tug'ruqli hamda 6 oydan ortiq laktatsiya davridagi ayollar orasida nazorat guruhiga (12,1 g/l; 30,5 g/l; 652 kkal/l) nisbatan pastdir.

III darajali anemiyada, I va II darajalarga nisbatan, oqsil va yog'larning energiya qiymati yanada kamaygan ($R<0,01-0,001$), uglevodlar hisobiga sutning nisbiy kaloriya qiymati esa ortgan ($R<0,01-0,001$). 30 yoshdan katta, 3 va undan ortiq tug'ruqli hamda 6 oydan ortiq laktatsiyadagi ayollarda oqsillar (5,48%, 5,71%, 5,82% ga nisbatan sog'lomlarda 7,6%) va yog'lar (41,4%, 41,3%, 41,7% ga nisbatan nazoratda 46,4%) hisobiga energiya yetishmovchiligi aniqlangan.

Shuningdek, 20 yoshgacha, 21–29 yoshdagi hamda birinchi marta tug'ruq qilgan ayollarda oqsil (6,24%, 6,38%, 6,35%) va yog' (42,6%, 43,3%, 41,6%) energiya qiymatlarining kamayishi I va II darajadagi anemiyada kuzatilmagan bo'lib, bu emizikli ayollarda og'ir darajadagi anemiya sog'lik holatining sezilarli darajada yomonlashganidan dalolat beradi.

XULOSA: Shunday qilib, I darajali anemiyaga ega emizikli onalar orasida ona sutining tarkibida oqsillar, yog'lar, uglevodlar va kaloriya miqdorining kamayishi kuzatiladigan ayollar toifasi mavjud.

II darajali anemiyaga ega ayollarda esa ona suti tarkibidagi oziq moddalarning va kaloriyaning sezilarli darajada kamayishi ro'y beradi. Bu kamayish 30 yoshdan oshgan, 3 va undan ortiq marta tug'gan hamda 6 oydan ortiq emizayotgan ayollar guruhida yanada yaqqol namoyon bo'ladi. Bunday hollarda ona sutining energiya qiymati asosan uglevodlar hisobiga saqlanib turadi.

III darajali og'ir anemiyaga ega ayollarda esa barcha guruhlarda oziq moddalarning va kaloriya qiymatining keskin pasayishi kuzatiladi. Bu esa bolalarda oziq modda va energiya yetishmovchiligiga olib keladi hamda alimentap tanqislik holatlarining rivojlanishiga sabab bo'lishi mumkin.

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