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ПАТИССОН (*Cucurbita pepo var. melopepo*) СЕЛЕКЦИЯСИ УЧУН БОШЛАНҒИЧ МАНБА МАТЕРИАЛЛАРИНИ ЙИҒИШ ВА F 1 ДУРАГАЙЛАРИНИ ЯРАТИШ

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АННОТАЦИЯ.

Мақолада патиссон ўсимлигининг гибрид дурагайларини яратиш учун бошланғич материални танлаш ва ўрганиш ҳақида маълумотлар берилган. Буни амалга ошириш учун бир қанча вазифаларни бажариш кўзда тутилган. Тадқиқот қуйидаги методик кўрсатмалар асосида олиб борилди. Руководство по апробации овощных культур и кормовых корнеплодов (Брежнев Д.Д., 1982), Методика полевого опыта (Доспехов Б.А., 1985), Методика полевого опыта и овощеводстве и бахчеводстве (Белик В. Ф., 1979), Методика государственного сортоиспытания сельско хозяйственных культур (1975).

Тадқиқот давомида патиссоннинг 33 та нав намуналарининг морфологик хусусиятлари батафсил ўрганилди. Ўсимлик турига кўра, бутаси тик ўсувчи патиссонлар турига Солнишко, Самбреро, Нежное парфе, Учар ликопча, Копейка, Карапуз ва бошқаларни киритиш мумкин. Поясини шохланиш типи бўйича нозик ва ўртача патиссонларга Марсианин, Патиссон Наф-наф, Деликатесни киритиш мумкин. Ўсимликни туп шакли бўйича очиқ ва ярим очиқ буталарга бўлинади. Очиқ формасига 27-29 та баргдан иборат бўлган Пятичокни, 28-30 баргдан иборат Солнишко кальчуга, Цветное триони киритиш мақсадга мувофиқ.

Қимматли хўжалик белгиларини юқорилиги бўйича қуйидаги турлар ажратилди: Пятичок, Самбреро, Марсианин, ўртапишарлиги бўйича Диск ва Чебурашка. Ҳосилдорлигини юқорилиги бўйича Самбреро- 9.47 кг\м^2, Пятичок -7.08 кг\м^2, Мини крошка -6. 16 кг\м^2. Солнишко- 5.58 кг\м^2. Цветное

трио-2. 56 кг\м^2. Деликатес- 1. 65 кг\м^2. Кимёвий таркибининг юқорилиги бўйича Пятичок, Марсианин турлари аниқланди.
Калит сўзлар. Ҳосилдорлик. Маҳсулдорлик. Қимматли хўжалик белгилар. Эрта пишар. Эртанги ҳосилдорлик. Биологик ҳосилдорлик.

Кириш. Полизчиликнинг асосий вазифаларидан бири аҳолини йил давомида полиз меваларига бўлган талабини қондириш, юқори технологиялар, механизацияни қўллаб, сарф-харажатларни камайтиришдир.[8].Ўзбекистон асрлар давомида сабзавот ва полизчилик кенг ривожланган минтақалар қаторига киради. Соҳа мутахассислари олдида Ўзбекистонда полиз экинлари ичида янги дурагай экин патиссоннинг янги навларини Ўзбекистон жанубида экишга мослаштириш ҳамда ундан мўл ҳосил олиш, уни фойдали хусусиятларини аҳолига тушунтириб етказиш, ундан олинадиган потециал ҳосилини янада ошириш, аҳолини полиз мевалари билан мумкин қадар узоқроқ вақт таъминлаш, бунинг учун эса эртапишар, касалликка чидамли ва узоқ вақт сақланувчан навлар яратишдек муҳим масала турибди.[5]. Патиссоннинг 2 та нави (Оқ-13, Заркокил) 1988 йилда Ўзбекистонда яратилди, уларнинг агротехникаси ишлаб чиқилди. Патиссоннинг Европа давлатларида экиладиган сифатли нав намуналарини Ўзбекистон жанубий минтақаларида экишга мослаштириш ва уларни дурагайлаш туфайли янги иссиқ иқлимга мослашган, серҳосил, касаллик ва ноқулай шароитларга чидамли навларни яратиш ва уруғчилик технологияси элементларини ишлаб чиқиш тадқиқотнинг асосий мақсадидир.[1].

Тажриба қўйилган Сурхондарё вилоятининг саҳро минтақасига кирувчи суғориладиган, ўтлоқлашиб бораётган тақирсимон ва тақир тупроқлар тарқалган бўлиб, ушбу минтақа иқлими кескин ўзгарувчан, йиллик ёғингарчилик миқдори 100-200 мм ни ташкил этиб, унинг асосий қисми (50-52%) кеч куз ва қишда ёғади, март апрел ойларидаги ёғингарчилик 37-40% дан ошмайди. Воҳанинг чўл қисмида ҳаво ҳарорати юқори бўлиб, йиллик ўртача 18 °С, айрим туманларда 19-20 °С га етган йиллар ҳам мавжуд. Мавсумда вилоятнинг жанубий туманларида ўртача ҳаво ҳарорати 25,6–28,7 °С ни, ёзда 35 °С ни, кунлик 39-42 °С ни ташкил этади. Бу ерларда энг юқори ҳарорат +40-50 °С, энг паст -20 °С атрофида бўлиши кузатилган, йил давомида 260-270 кунлар иссиқ бўлиб, ёғингарчилик миқдори 127-170 мм, мавсумда эса 30-40 мм, нисбий намлик мавсумда 30-40% баъзи ойларда 18-20% гача пасаяди. Термиз гуруҳи туманларида чанг-тўзонли кунлар,

шамоллар кўп бўлиб, ёз пайтида ҳавонинг нисбий намлиги 9-10% гача пасайиши мумкин.

Патиссоннинг ёш меваларининг истеъмол қилиниши сабаблари - бу мевалар парҳез маҳсулот бўлиб, уларни ҳам янги узилганлари истемолга тавсия этилади, ҳамда 5-7 кунлик мевасини қайта ишланган ҳолда озиқ-овқатга ишлатиш мумкин. Шу билан бирга, патиссон мевалари таркиби витаминларга бойлиги ва шифобахш хусусиятларга эга бўлганлиги учун улардан табобатда фойдаланиш мумкин. Патиссоннинг маҳаллий, касалликларга чидамли, комплекс қимматли хўжалик белгиларига эга, дурагайларини ҳамда уларни уруғчилигини ташкил қилиш мақсадида тадқиқот олиб борилди. [8].

1. Олиб борилган илмий изланишлар натижасида етиштирилаётган патиссоннинг турли нав ва дурагайлари орасидан якка танлов асосида танланган нав ва дурагайларини ажратиб олинди.
2. Патиссонни нав ва дурагайлар селекцияси учун ота-оналик шаклларини танлаб олинди.
3. Патиссонни ота-оналик шаклларини комбинацион қобилиятини ўрганиш натижасида диаллел услубда чатиштириш ва дурагайлар олиш мақсад қилинди

Тадқиқот методлари: Барча вариантлар бир майдонга жойлаштирилади. Баҳорги муддатда ва қатор оралиқларида экиш режалаштирилган майдонлардаги ўсимликларни ўсув даврида қуйидаги: ҳаво ва тупроқ ҳарорати, уруғнинг униб чиқиши ва кўчатлар сони, фенологик кузатувлар, биометрик ўлчовлар, мевасининг тузилиши ҳамда мевалар вазни, барглар юзаси ва барг пояларининг вазни, касаллик ва зараркунандалари ҳамда ҳисоблаш изланишлари, Белика В.Ф. «Методика опытного дела в овощеводстве и хозяйстве». М., ВО Агропромиздат, 1992, Б.Ж.Азимов, Б.Б.Азимов “Сабзавотчилик, полизчилик ва картошкачиликда тажрибалар ўтказиш методикаси”.-Т.:ЎЗМЕ, 2002. Ушбу методикаларга асосланиб олиб борилди.

Натижалар. Изланишлар 2022 йилдан то 2024 йилгача Сабзавот, полиз экинлари ва картошкачилик илмий тадқиқот институти Сурхондарё илмий-тажриба станциясида олиб борилди. Тажриба станцияси Сурхондарё вилояти Термиз тумани Намуна СИУ ҳудудида жойлашган. Тадқиқот материали бўлиб, патиссоннинг 33 та нав намуналари хизмат қилди. Уруғларни очиқ майдонга экиш ишлари апрел ойининг 2 чи ўн кунлигида амалга оширилди. Ҳар бир нав намуналаридан 10 донадан кўчат 70х70 схемада экилди.

Тажриба делянкалари ораси 5 м^2. Тажрибалар 2022 йилда қайтариқсиз, 2023 йил ва 2024 йилда 3 қайтариқли тартибда ўтказилди. Назорат варианти сифатида оқ рангли патиссонлар учун Оқ- 13, Сариқ рангли патиссонлар учун Карапуз, Яшил рангли патиссонлар учун Арбузинка нави олинди. Сунъий чанглантириш ишлари май ойининг 2-3-ўн кунлигида олиб борилди. Чанглатилган эркак ва урғочи гуллар ҳаво ўтказадиган тўр халтачалар билан изоляция қилинди. Чанглантириш эрталаб соат 8 дан то 12 гача бўлган ораликда олиб борилди. Уруғларни йиғиб олиш ишлари июн ойининг 3 ўн кунлиги ва июл ойининг 1 ўн кунлигида амалга оширилди. Ҳосилни йиғиш ва ўлчов ишлари ҳафтада 2 марта олиб борилди. Патиссон мевалари техник пишганда терилди. Патиссон вегетация даврида фенологик кузатувлар олиб борилди.

№	Танланган навлар	Афзаллик белгилари	Чатиштириш схемаси	Олинган натижалар
1	**Самбреро**	Эрта пишар. Туп ҳосил қилади. 42-45 кунда пишиб етилади. Ҳосилдор. 6-7 кг\ м2. Касалликка чидамли, оқ рангда. Четлари тишчали.. Товарбоп. Мева кўриниши чиройли	**Самбреро X SUN**	Эрта пишар. Ҳосилдорлиги 6-7 кг\м2. 38-42 кунда пишиб етилади. Касалликка чидамли. Мева эти оқ. Четлари тишчали. Жимжимадор. Товарбоп.
2	**Диск**	Эрта пишар, нав. Мева ранги оқ, биологик етилганда 400-900 гр. Ҳосилдор нав.	**Диск X Летающая тарелка**	Эрта пишар, нав. 38-50 кунда пишиб етилад. Ташқи томони силлиқ оқ рангда. Илдизи қисқа. Мева эти оқ

		Ҳосилдорлиги 5,8- 6,7 кг\м2		ялтироқ. Ҳосилдорлиги 6,8-7,7 кг\м2.
3	**Солнишко**	Эрта пишар пояси туп ҳосил қилади.. Биологик етилганда сариқ. Ети юмшоқ, серет. Ўрта пишар. 58-69 кунда етилади. Ҳосилдорлиги 4,0-4,7 кг\м2.	**Солнышко Х Карапуз**	Эрта пишар. сариқ. Меваси 16-18 гр келади. Меваси тўлиқ, серет, жуда майин. 5 см катталикда.. Ҳосилдорлиги 10 кг\м2. Мева ранги сариқ
4	**Марсианин**	Эрта пишар нав. Мева пишиши 42-45 кун. Мева шакли диск шаклида. Четлари икки карра тишчали. Мева ранги яшил . Мевасини оғирлиги 200-250 гр келади...	**Марсианин Х Арбузинка**	Эрта пишар. Ранги яшил. Йўл-йўл чизиғи бор. бодрингга ўхшаб таъм беради. 38-39 кунда тўлиқ етилади. Ҳосилдорлиги 10 кг\м2.

1-расм. Диск Х Летающая тарелка

2-расм.Солнишко Х Карапуз

3-расм. Марсианин Х Арбузинка

4-расм. ***Самбреро Х Сун***

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PECULIARITIES OF ORGANIZING ART CLASSES IN SPECIAL SCHOOLS

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Abstract. Fine art classes are considered as one of the main subjects in the educational process of auxiliary schools. Because visual arts classes serve to enrich children's artistic and aesthetic outlook. Under the influence of visual arts, children's level of emotional awareness increases, and their intellectual and willful qualities develop. Correction of hand motor skills is also performed effectively.
Key words: school, education, visual arts, lesson, science, training.

Teaching children to perceive, understand, perceive and independently think about the beauty in life and art, to develop and enrich their artistic-aesthetic imagination, worldview, to cultivate a conscious attitude to the environment and culture is the main part of visual arts. is the goal.

Visual art classes in the secondary school include the following tasks related to the artistic education of children:

• as one of the first elements of moral education in students, to develop such qualities as noticing, observing, understanding, imagining and analyzing, comparing, thinking, summarizing, mastering beautiful and elegant things;

• to teach students to observe events of social life and to form preliminary ideas about them through events depicted in works of visual art;

• to further develop students' theoretical understanding by giving them an understanding of the types of visual art training;

• to give students an understanding of the shape, structure, size, differences in appearance, well-known signs of things, to teach them to feel the sequence and color of pattern elements;

• by teaching students to make and draw different things based on different materials, to strengthen their cognitive activity and independence, to further develop their creativity and initiative;

• to educate students in the spirit of good manners, friendly attitude and mutual assistance, as well as respect for historical and national traditions - customs, rituals, traditions by means of visual arts;

• to teach to appreciate the national profession - trades;

• through visual arts, to educate students' love for the nature of their beloved country, interest in the social work of people, and a sense of respect;
• formation and development of students' artistic-aesthetic taste, ecological spirituality;
• education of artistic culture in students;
• to provide artistic education to secondary school students based on finger gymnastics, various imaging exercises, and didactic games in order to eliminate some defects;
• development of artistic and creative abilities, initiative and independence in secondary school students;
• to teach secondary school students to be able to reflect the aesthetic feelings and concepts obtained on the basis of seeing and perceiving things and events in the environment in the pictures they draw;
• development of visual and construction-making skills of students with the help of various auxiliary tools and methods;
• development of features such as visual memory, tactile ability, color perception, visual imagination in secondary school students;
• to introduce secondary school students to the fundamentals of visual and decorative - applied art, architecture, and to further expand their range of artistic thought;
• teaching auxiliary school students to apply in life the knowledge and skills they have acquired in the practical works of fine art, artistic construction - making classes;
• to develop aesthetic and emotional sensitivities in auxiliary schoolchildren to the events taking place in the environment;
• artistic construction - teaching to make various toys from cardboard and colored paper, natural and discarded materials, etc.

It requires the implementation of general tasks from the visual arts in auxiliary schools, the provision of visual aids, didactic materials, electronic textbooks and special educational films, as well as the necessary literature for teachers and students. Each of the visual arts classes is for students with mental retardation. One of the necessary conditions is that it helps to correct their shortcomings, has a positive effect on their personal qualities and general development, and enriches the range of artistic knowledge of each student. For this purpose, it is necessary to strengthen the preliminary preparatory work, to bring the process of artistic

education to students in connection with life and practice. Only then will it be possible to develop the artistic and aesthetic culture of students in a national way.

Special attention is paid to didactic principles in the teaching of visual arts in auxiliary schools. It is known that the conscious acquisition of knowledge and skills from visual arts requires a certain degree of independence and activity from the student. Mentally retarded students often find it difficult to find solutions to simple questions even in higher classes. Accordingly, it is necessary to give them tasks that are as understandable as possible. For this, first of all, it is necessary to educate the student to want to do the work and to have confidence in his own strength.

Demonstration is important in auxiliary school education, it allows further development of the student's perception and imagination. Mentally retarded children understand the external and internal nature of objects, events and phenomena through visualization. Through this, their thinking becomes correct. It is worth noting that it is important to develop the intuition, perception, and thinking of mentally retarded students. Because the main defect in mentally retarded children is the underdevelopment of thinking. The main shortcoming of the thinking of secondary school students is superficiality, slowness, narrowness, lack of independence. That is why it is important to make auxiliary school education simple, to provide educational materials to students in a clear and understandable way. Also, it is necessary to pay special attention to the fact that the intellectual activity and independence of mentally retarded students is somewhat low and inactive in the process of art education. The higher the organization of fine arts classes, the more this activity affects the development of the individual.

Pupils acquire various knowledge, skills and abilities from visual arts and improve their activities. If the students' visual activity was initially based on analysis, it gradually turns into independent creative expression. During the artistic-aesthetic development of the student, his artistic activity acquires a positive character based on the increasing experience of imaging. In this case, the student's visual activity gives a wide opportunity to search for new ways and directions. In the process of visual activity, students develop spiritually and artistically and aesthetically. Any of their activities becomes a socially useful activity.

In the artistic and aesthetic education of students from fine arts, national works of Uzbek painters depicting the nature, social life, and labor of people in Uzbekistan, as well as poems, stories, fairy tales, parables, paintings related to Nowruz, it will be appropriate to pay attention to the use of songs.

In order to further enrich the artistic education of students, it is useful to organize more trips to nature and museums with them, and to strengthen the organization of theatrical performances.

In the conditions of the transition to the current market relations, it is important to inculcate hard work and thriftiness in students by providing economic education from visual arts, as well as connecting them with the environment, life, nature, and practice in the implementation of ecological education. That's how visual art becomes an effective product of educational work.

The most important thing is that students should consider using the knowledge, skills, and abilities acquired from visual arts in life.

Also, it is allowed to determine, increase, decrease, and make some changes to the number of hours allocated to each subject of fine art classes based on the circumstances. When making changes, it is important to consider the knowledge, skills, and abilities that students of I-IV grades should acquire.

In the planning of subjects related to visual arts, importance was attached to the work of seasonal (for red calendar days) themed pictures, and the rules of consistency, sequence and progress from simple to complex were specially followed in the arrangement of subjects. All these useful activities allow to achieve effective success in this field.

To give students an understanding of decorative painting. To help them create pattern elements by stylizing real images (plants and fruits, geometric shapes, spatial objects, birds, animals, insects, objects, human figures, etc.) and develop the structure of pattern compositions. Also, to introduce different patterns in folk art and to teach them how to make simple patterns. Creating the ability of students to make independent patterns. To develop students' skills in creating decorative patterns for various items by creating pattern compositions from different materials; to further enrich their aesthetic sense and develop their ability to perceive.

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LIMFOBLASTLI LEYKOZLARNING O‘ZIGA XOS MORFOLOGIK VA IMMINOFENOTIPIK XUSUSIYATLARI.

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Tadqiqot maqsadi: Bolalarda limfoblastli leykemiyaning patomorfologik va immunofenotipik xususiyatlarini o‘rganish orqali kasallikning diagnostik mezonlarini takomillashtirish va davolash usullarini individualizatsiya qilish uchun ilmiy asos yaratish. Limfoblastli leykemiyalar (LBL) bolalar orasida eng keng tarqalgan o‘tkir leykemiya turi bo‘lib, u limfoblastlarning o‘sishi va ko‘payishi bilan tavsiflanadi. LBL klinik jihatdan juda turlicha bo‘lib, turli patomorfologik va immunofenotipik o‘ziga xosliklarga ega. Ushbu o‘ziga xosliklarni o‘rganish LBL ni to‘g‘ri diagnostika qilish, individual davolash usullarini tanlash va kasallik prognozini yaxshilash uchun juda muhimdir.

Tadqiqot vazifalari:

1. Limfoblastli leykemiyalarning patomorfologik xususiyatlarini aniqlash: Limfoblastlarning morfologik xususiyatlarini o‘rganish, suyak iligi va boshqa a'zolardagi o‘zgarishlarni aniqlash, kasallikning turli bosqichlarini tasniflash.
2. Immunofenotipik xususiyatlarni o‘rganish: LBL ning B-hujayrali va T-hujayrali turlarini aniqlash uchun immunofenotipik markerlarni tahlil qilish, bu markerlar asosida kasallikning tashxislash va prognoz qilish imkoniyatlarini o‘rganish.
3. Klinik xususiyatlar bilan bog‘liqlikni o‘rganish: Patomorfologik va immunofenotipik xususiyatlarning klinik simptomlar, kasallikning rivojlanishi va davolashga javob berish bilan bog‘liqligini tahlil qilish.
4. Kasallik prognozini yaxshilash: Olingan natijalar asosida bolalarda LBL ning klinik, patomorfologik va immunofenotipik xususiyatlariga asoslangan prognoz modellarini yaratish.

Leykozda saraton to’qimasi dastlab suyak iligi lokalizatsiyalangan joyida o’sadi va asta-sekin normal qon hosil qilish hujayralari o’rnini egallab oladi. Ushbu jarayon natijasida tabiiy ravishda bemorda sitopeniyaning turli xil variantlari rivojlanadi, xususan anemiya, trombotsitopeniya, limfotsitopeniya, granulotsitopeniya. Buning natijasida esa o’z navbatida immunitetning zaiflashuvi va uning fonida infektsion kasalliklarga chalinishga moyillik hosil bo’lishi, qon ketishlar kuzatila boshlaydi.

Tadqiqot materiallari:

1. Bemorlar tanlovi: Tadqiqotda limfoblastli leykemiya tashxisi qo‘yilgan 1 yoshdan 15 yoshgacha bo‘lgan bolalar ishtirok etdi. Bemorlar turli xil klinik markazlardan tanlandi va ular tasodifiy tanlash usuli bilan guruhlarga bo‘lindi.
2. Biopsiya materiallari: Suyak iligi biopsiyasi va zarur holatlarda limfa tugunlari, jigar va taloqdan olingan biopsiya namunalari tadqiqotning asosiy materiali sifatida ishlatildi. Ushbu namunalar morfologik va immunofenotipik tahlil uchun ishlatildi.
3. Laboratoriya uskunalari va reagentlar:
   - Gistologik tahlillar: Oddiy va maxsus bo'yovlar yordamida gistologik kesmalar tayyorlash uchun mikrotom va mikroskop ishlatildi.
   - Immunofenotipik tahlillar: Oq qon hujayralarining immunofenotipini aniqlash uchun oqim sitometriya (flow cytometry) usuli va tegishli antikorlar (CD19, CD10, CD22, CD2, CD3, CD7) qo‘llanildi.
   - Molekulyar biologik usullar: PCR (polimeraza zanjir reaksiyasi) va RT-PCR usullari bilan genetik markerlarni o'rganish uchun reagentlar va uskunalar ishlatildi.
4. Statistik tahlil vositalari: Olingan ma'lumotlarni statistik tahlil qilish uchun SPSS (Statistical Package for the Social Sciences) yoki R dasturlari qo'llanildi. Kasallikning turli xususiyatlari bilan klinik simptomlar o'rtasidagi bog'liqlikni aniqlash uchun korrelyatsion tahlillar, logistika regressiyasi va boshqa statistik metodlar ishlatildi.

Natijalar: Ushbu tadqiqot natijalari LBL tashxisi va davolashini yaxshilashga, shuningdek, kasallikning individual xususiyatlariga qarab davolash strategiyalarini tanlashga yordam beradi. Patomorfologik va immunofenotipik tahlillar asosida aniqlangan ko‘rsatkichlar bemorlarning prognozini aniqlashda ham muhim rol o‘ynaydi. Oq qon kasalligini tashxisida morfologik tadqiqotlar katta ahamiyatga ega. Hayot chog’idagi morfologik tashxisning asosiy usullari yonbosh suyagi trepanobiopsiyasi yoki to’sh suyagi va boshqa a’zolarning punktsiyasidan olingan suyak iligining biopatlari va periferik qon surtmalarini o’rganish sanaladi.

Xulosa: Bolalarda limfoblastli leykemiyalarni to‘g‘ri tashxislash va samarali davolash uchun patomorfologik va immunofenotipik xususiyatlarni chuqur o‘rganish zarur. Tadqiqotlar davomida aniqlangan natijalar ushbu kasallikni yanada samarali davolash usullarini ishlab chiqishga katta hissa qo‘shishi mumkin. Surunkali leykemiyada shifokor qo’llab-quvvatlovchi taktikani tanlaydi, uning maqsadi asoratlar rivojlanishini kechiktirish yoki oldini olishdir. O’tkir leykemiyada shoshilinch terapiya talab qilinadi, bu yuqori dozalarda

kimyoterapevtik vositalarni qabul qilishni o'z ichiga oladi. Kimyoterapiya organizmga oq qon hujayralaridan tozalanishga imkon beradi. Shundan so'ng, agar talab etilsa, sog'lom donorlik suyak iligi hujayralarini transplantatsiyasi buyuriladi.

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THE RELEVANCE OF STROKE AND LIVER FUNCTION.

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Abstract: Cerebral stroke (ONMK) is a leading cause of morbidity and mortality worldwide, with far-reaching systemic consequences. Among the less explored but critical areas is the relationship between stroke and liver function. This article investigates the complex interplay between stroke-induced brain damage and hepatic function, emphasizing the pathophysiological mechanisms that link cerebral ischemia to liver dysfunction. The discussion includes insights into the metabolic, inflammatory, and oxidative stress responses that affect both organs, highlighting the importance of integrated care in stroke management.
Keywords: Stroke, ONMK, liver function, cerebral ischemia, hepatic dysfunction, oxidative stress, systemic inflammation.

INTRODUCTION

Stroke, or acute cerebrovascular accident (ONMK), is a significant public health issue, recognized as one of the leading causes of death and disability worldwide. While the neurological impacts of stroke are well-documented, its systemic effects, particularly on liver function, are less understood. The liver, a key organ in metabolic regulation, detoxification, and immune response, can be significantly impacted by the systemic consequences of stroke. This article seeks to explore the pathophysiological connections between stroke and liver function, providing insights into the clinical implications of these interactions.

Methods

1. Literature Review: A comprehensive review of existing studies on the relationship between stroke and liver function was conducted. Databases such as PubMed, Scopus, and Google Scholar were utilized to gather relevant articles from the past two decades.
2. Clinical Observations: Analysis of clinical cases and observational studies that reported liver function anomalies in stroke patients.
3. Biochemical Analysis: Examination of biochemical markers of liver function, including liver enzymes (ALT, AST), bilirubin levels, and markers of hepatic inflammation in stroke patients.

In the past, stroke research has focused mainly on intracerebral events following focal ischemia, where oxygen and glucose deprivation triggers excitotoxicity, inflammation, oxidative stress, blood–brain barrier (BBB) disruption and eventually cell death. Despite decades of intense research, therapeutic options for acute ischemic stroke (AIS) are still limited to recanalization approaches with only a minority of stroke patients being eligible for the administration of tissue-type plasminogen activator (tPA), a thrombolytic drug, even when combined with endovascular thrombectomy. Recently, the consequences of AIS for other organs than the central nervous system have received increasing attention and it is now widely accepted that stroke induces multiple alterations in the periphery.

Results

1. Metabolic Dysfunction Post-Stroke: Stroke-induced cerebral ischemia triggers a cascade of metabolic changes that can extend beyond the brain. The liver, being central to metabolic homeostasis, often shows signs of dysfunction. Elevated levels of liver enzymes (ALT, AST) have been reported in patients post-stroke, indicating hepatic stress or damage. This can be attributed to systemic inflammation and oxidative stress that arise as a result of ischemic brain injury.
2. Inflammatory Response and Liver Stress: The inflammatory response following a stroke plays a pivotal role in liver dysfunction. The release of pro-inflammatory cytokines such as TNF-α, IL-6, and IL-1β from the brain and immune cells can cause hepatic inflammation. This response may exacerbate pre-existing liver conditions or trigger acute hepatic injury, particularly in patients with predisposing factors such as metabolic syndrome or alcohol use.
3. Oxidative Stress and Hepatic Impact: Oxidative stress is a major consequence of stroke, contributing to both neuronal and hepatic injury. Reactive oxygen species (ROS) generated during ischemic events can overwhelm the liver's antioxidant defenses, leading to lipid peroxidation, mitochondrial dysfunction, and subsequent liver cell apoptosis. The liver's role in detoxifying these harmful byproducts makes it particularly vulnerable during systemic oxidative stress.
4. Hepatic Encephalopathy and Stroke Interactions: In severe cases, the interplay between liver dysfunction and stroke can lead to complications such as hepatic encephalopathy, where liver failure exacerbates neurological symptoms. This bi-directional relationship highlights the need for a holistic approach to managing stroke patients, considering potential hepatic complications.
5. Clinical Implications: Understanding the liver-brain axis is crucial for improving patient outcomes post-stroke. Monitoring liver function in stroke patients can

provide early indicators of systemic complications, allowing for timely interventions. Moreover, therapeutic strategies aimed at reducing systemic inflammation and oxidative stress may protect both brain and liver function, enhancing recovery prospects.

With the accelerated aging of the population, ischemic stroke has become a heavy disease burden worldwide. Acute brain ischemia leads to a series of alterations in the immune system, the hypothalamic–pituitary–adrenal axis, and the autonomic nervous system, which negatively affect peripheral organs and contribute to ischemic brain injury development. Emerging research highlights a bidirectional communication between the brain and liver, as evidenced by changes in hepatic glucose metabolism, bilirubin, and liver enzyme levels in the early stages of an ischemic stroke, which subsequently influence stroke prognosis

Discussion

The connection between stroke and liver function is complex, involving multiple pathophysiological mechanisms that can worsen outcomes in stroke patients. The liver's response to systemic inflammation and oxidative stress following a stroke highlights the importance of integrated care approaches. This understanding urges clinicians to monitor hepatic function closely in stroke patients, especially those with underlying liver conditions or metabolic disorders. Furthermore, research into protective strategies, such as the use of antioxidants or anti-inflammatory agents, could mitigate the hepatic impact of stroke, improving overall patient prognosis.

Conclusion

The relevance of stroke to liver function extends beyond the brain, affecting systemic health and recovery. The interplay between cerebral ischemia and hepatic function underscores the need for comprehensive stroke management strategies that address not only neurological deficits but also potential systemic complications. By recognizing and addressing the impact of stroke on the liver, healthcare providers can better support patient recovery and reduce the risk of long-term complications.

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ИСТАНБУЛ ҲАРАКАТЛАР РЕЖАСИ ТАВСИЯЛАРИ ДОИРАСИДА ЖИНОЯТ ҚОНУНЧИЛИГИГА ПОРА СЎРАШ, ПОРАНИ ВАЪДА ҚИЛИШ, ТАКЛИФ ЭТИШ ВА ПОРА БЕРИШ ВАЪДАСИ ЁКИ ТАКЛИФИНИ ҚАБУЛ ҚИЛИШ УЧУН ЖАВОБГАРЛИК ЖОРИЙ ҚИЛИШНИНГ АҲАМИЯТИ

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АННОТАЦИЯ: Мақолада Иқтисодий ҳамкорлик ва тараққиёт ташкилотининг коррупцияга қарши курашиш тармоғи Истанбул ҳаракатлар режасига аъзо мамлакатларда порани ваъда қилиш, таклиф этиш ва тақдим этиш учун жорий қилинган жавобгарлик ҳамда мониторинг тавсиялари доирасида миллий жиноят қонунчилигига порани ваъда қилиш, таклиф этиш ва пора бериш ваъдаси ёки таклифини қабул қилиш учун жавобгарлик жорий қилишнинг аҳамияти баён қилинган.
ТАЯНЧ ИБОРАЛАР: ноқонуний афзаллик, пора сўраш, порани ваъда қилиш, таклиф қилиш, криминализация, жавобгарликка тортиш.

Актив порахўрлик таркибининг мажбурий элементи сифатида қараладиган оммавий мансабдор шахсга қасддан бирон афзалликни ваъда қилиш, таклиф қилиш ёки тақдим этиш Европа иқтисодий ҳамкорлик ташкилоти Конвенцияси, Европа Кенгашининг Коррупция учун жиноий жавобгарлик тўғрисидаги Конвенцияси ва БМТнинг коррупцияга қарши Конвенциясига мувофиқ жиноий жавобгарликка тортиладиган ҳаракат сифатида эътироф этилади.

Таъкидлаш жоизки, ушбу Конвенцияларнинг барчасида бундай хатти-ҳаракатларни алоҳида тугалланган жиноят сифатида жавобгарликка тортиш зарурлиги тўғрисида қоидалар мавжуд. Шу билан бирга, ноқонуний афзалликни сўраш ва бундай афзалликни таклифини/ваъдасини қабул қилиш тугалланган ва автоном таркиб сифатида жиноий жавобгарликка тортилиши керак.

“Ваъда” пора олувчининг пора олиш талабини қўйган ёки қўймаганлигидан қатъи назар, пора берувчининг кейинроқ (масалан, мансабдор шахс пора берувчи талаб қилган ҳаракатни бажаргандан сўнг) ноқонуний афзалликни беришни ўз зиммасига олганида вужудга келади.

“Таклиф” пора берувчининг ноқонуний афзалликни беришга тайёрлигини билдирганида вужудга келади.

“Тақдим қилиш” пора берувчининг аслида ноқонуний афзалликни топширганда юзага келади.

“Сўраш” мансабдор шахс бошқа бир шахсга, у шахс мансабдор шахс ҳаракатни амалга ошириши ёки ундан воз кечиши учун пора тўлаши кераклигини аниқ ёки билвосита билдирганида содир бўлади.

“Пора бериш таклифи ёки ваъдасини қабул қилиш” мансабдор шахс бундай таклиф ёки ваъдага жавобан келгусида бериладиган порани олишга тайёрлигини билдирганда вужудга келади.

“Қабул қилиш” мансабдор шахс ёки бошқа бирор шахс томонидан ноқонуний афзалликни амалда қабул қилишини англатади. [1.]

Истамбул ҳаракатлар режасига аъзо барча мамлакатларда давлат секторида пора бериш ва олишга жиноий жавобгарлик ўрнатилган.

2011 йилда Озарбайжон ва 2012 йилда Арманистон пора сўраш ва пора таклифини/ваъдасини қабул қилишни ўзининг жиноят қонунчилигига жорий қилган бўлса, 2013-2014 йилларда Украина ноқонуний афзаллик ваъдасини ва таклифини/ваъдасини қабул қилишни, шунингдек, порахўрликни барча таркибида (давлат ва хусусий секторда) ноқонуний афзалликни тақдим қилишни сўрашни криминализация қилди. Мўғулистон 2017 йилда қабул қилинган янги Жиноят кодексида пора бериш таклифи ва пора беришга ваъда қилишни криминализация қилди. [2. 242-Б] *(Қуйидаги жадвалга қаранг)*

Истанбул ҳаракатлар режасига аъзо мамлакатларда “порахўрлик” жинояти таркибий белгиларини криминаллаштириш

	Таклиф	Ваъда	Сўраш	Таклиф ёки ваъдани қабул қилиш
Арманистон	l	l	l	l
Озарбайжон	l	l	l	l
Грузия	l	l	l	l
Қозоғистон	m	m	m	m
Қирғизистон	l	l	m	l (фақат таклиф)
Мўғулистон	l	l	m	l
Тожикистон	m	m	m	m
Украина	l	l	l	l

Ўзбекистон	m	m	m	m
l Ҳа m Йўқ				

Манба: ИҲР мониторинг ҳисоботлари [2. 243-Б]

Қирғизистон Республикаси янги Жиноят кодексида (2019 йилда қабул қилинган) пора бериш таклифи ёки пора бериш ваъдаси ва уни қабул қилишни мустақил тугалланган жиноят сифатида жавобгарлик жорий қилинган.

Истанбул ҳаракатлар режасига аъзо мамлакатлар орасида Украина Жиноят кодексига “таклиф” ва “ваъда” тушунчаларини таърифини киритган ягона мамлакатдир.

Истанбул ҳаракатлар режаси мониторингнинг Ўзбекистонга оид 3-раунд ҳисоботида пора бериш ваъдаси ва таклифи, шунингдек, ҳам давлат, ҳам хусусий секторда ҳар қандай ташкилот, корхона, муассаса мансабдор шахси томонидан пора беришга ундаш БМТ Конвенцияси қоидаларига мувофиқ жиноий жавобгарликка тортилиши кераклиги борасида тавсия [3. 226-Б] берилган бўлсада, бу борада Ўзбекистон Республикаси Жиноят кодексига тегишли ўзгартиришлар киритилмади.

Мониторинг гуруҳи ташрифи давомида Ўзбекистон томонидан юқорида қайд этилган элементларни криминализация қилиш масаласи бугунги кунда ҳал этилмаганлиги эътироф этилган. [3. 229 Б]

Бундан ташқари, Ўзбекистон Республикаси Жиноят кодексида хусусий секторда порахўрликни жиноий жавобгарликка тортадиган асосий таркиблар (Тижоратда пора эвазига оғдириб олиш, Нодавлат тижорат ташкилотининг ёки бошқа нодавлат ташкилотининг хизматчисини пора эвазига оғдириб олиш) ҳам БМТнинг Коррупцияга қарши Конвенциясини 21-моддасида назарда тутилган барча элементларни ўз ичига олмайди.

Ҳолбуки, БМТнинг коррупцияга қарши Конвенцияси ва халқаро аксилкоррупция стандартларига мувофиқ, пора сўраш, пора бериш ваъдаси ва таклифи ҳамда уни қабул қилиш алоҳида тугалланган жиноят сифатида жавобгарликка тортиш зарурлигини белгилаб берган бўлсада, амалдаги жиноят қонунчилигимизда пора сўраш, порани ваъда қилиш, таклиф этиш ва пора бериш ҳақидаги ваъдани ёки таклифни қабул қилиш каби ҳаракатлар тегишли моддалар диспозициялари билан қамраб олинмаган.

Мазкур ҳолат бу каби ҳаракатларнинг тугалланмаган жиноят сифатида квалификация қилиниши ёки умуман жиноят деб топилмаслигига сабаб бўлиши мумкин.

Юқоридагилардан келиб чиқиб шундай хулосага келиш мумкинки, БМТ Конвенцияси ҳамда халқаро стандартларга асосланган ҳолда пора сўраш, порани таклиф қилиш, ваъда қилиш ва пора бериш ҳақидаги ваъдани ёки таклифни қабул қилиш каби ҳаракатларни тугалланган жиноят сифатида эътироф этиш ҳамда миллий жиноят қонунчилигимизга ушбу қилмишларни тегишли моддалар билан қамраб олиш лозим. Чунки, бу каби қилмишлар ўз тавсифига кўра тугалланган пора олиш ва бериш жиноятлари каби ижтимоий хавфли саналади.

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ОШҚОЗОН ВА ЎН ИККИ БАРМОҚЛИ ИЧАК ЯРА КАСАЛЛИГИНИНГ ҚАЙД ЭТИЛИШ КЎРСАТКИЧИ ТАҲЛИЛИ

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Долзарблиги. Статистика маълумотларига кўра, катталар орасида аҳолининг 10–12 %, асосан 20–50 ёшли инсонлар гастродуоденал яралардан азият чекади. Эркаклар ва аёлларда касалликнинг учраш нисбати тўртга бирни ташкил этади. Ушбу муаммонинг долзарблиги шундаки, касалликни асосий сабаби туфайли ногиронлик эркакларда 68 %, аёлларда 30 % кузатилади [1].

Ошқозон яраси сурункали касаллик бўлиб, қайталанувчи, ремиссия, яъни касаллик белгилари сезиларли даражада заифлашиши ёки йўқолиши билан тавсифланади. Касаллик туфайли ошқозон ва ўн икки бармоқли ичак деворида нуқсонлар, яралар ҳосил бўлади [2].

Мақсад. Ўзбекистон Республикаси бўйича ошқозон ва ўн икки бармоқли ичак яра касаллигининг абсолют рақамлар, улардан бирламчи аниқланган ташҳис билан рўйхатга олинганларини ўрганиш.

Усул ва услублар. Ўзбекистон Республикаси Соғлиқни сақлаш вазирлигидан олинган ошқозон ва ўн икки бармоқли ичак яра касаллигининг абсолют рақамлардаги кўрсаткичи, улардан бирламчи аниқланган ташҳис билан рўйхатга олинганлар бўйича статистика маълумотлари қиёсий таҳлилидан фойдаланилди.

Натижалар. Ўзбекистон Республикаси Соғлиқни сақлаш вазирлигидан олинган статистика маълумотларига кўра, 2019-йилда ошқозон ва ўн икки бармоқли ичак яра касаллигининг абсолют рақамлардаги кўрсаткичи, улардан бирламчи аниқланган ташҳис билан рўйхатга олинганлар сони 32 244, шундан 14 ёшгача бўлган болалар 5 094, 15-17 ёшли ўсмирлардаги кўрсаткичи 3 226, катталарда 23 924 нафар беморларни ташкил қилди. 2020 йилда биринчи марта ташҳис қўйилган беморларнинг абсолют сони 29 158, шундан 14 ёшгача бўлган болалар 5 822, 15-17 ёшли ўсмирларда 3 948, катталарда 19 388 нафар беморларни ташкил қилди. 2021 йилда биринчи марта ташҳис қўйилган беморларнинг абсолют сони 23 950, шундан 14 ёшгача бўлган болалар 3 588, 15-17 ёшли ўсмирларда 2 827, катталар 17 535 нафар беморларни ташкил қилди. 2022 йилда биринчи марта ташҳис қўйилган беморларнинг абсолют сони 19 732, шундан 14 ёшгача бўлган болаларда 2 211, 15-17 ёшли ўсмирларда 1 338, катталарда 16 183 нафар беморларни ташкил қилди. 2023 йилда биринчи марта

ташҳис қўйилган беморларнинг абсолют сони 18 611, шундан 14 ёшгача бўлган болаларда 2 162, 15-17 ёшли ўсмирларда 1 247 нафар, катталарда 15 202 нафар беморларни ташкил қилди.

Хулосалар. Ошқозон ва ўн икки бармоқли ичак яра касаллигининг абсолют рақамлар, улардан бирламчи аниқланган ташҳис билан рўйхатга олинган касалликни кўрсаткичини ўрганиш натижасига кўра 2023 йилда Ўзбекистон Республикаси бўйича касалликни қайд этиш сони 2019 йилга нисбатан 42,3 % га камайган. 14 ёшгача бўлган болалар орасида касалликнинг кўрсаткичи 15-17 ёшли ўсмирлардаги кўрсаткичига нисбатан 50 % юқори эканлиги кузатилди.

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PROBLEMS AND THEIR SOLUTIONS IN THE FIELD OF IMPLEMENTATION OF AGREEMENTS BETWEEN UZBEKISTAN AND THE REPUBLIC OF KOREA ON THE PRACTICAL APPLICATION OF THE PRINCIPLES OF HIGHER EDUCATION

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Abstract

This article examines the challenges and potential solutions related to the implementation of agreements between Uzbekistan and the Republic of Korea on the practical application of higher education principles. Drawing upon the strengths of both educational systems, this partnership aims to enhance Uzbekistan's higher education sector. The study identifies key problems such as cultural differences, curriculum adaptation, administrative hurdles, and language barriers. Solutions are proposed, including fostering cultural exchange, joint curriculum development, streamlined administrative processes, and increased language support.

Keywords: Uzbekistan, Republic of Korea, higher education, agreements, implementation, educational collaboration, international cooperation, educational principles, cultural adaptation, technology transfer.

INTRODUCTION

The collaboration between Uzbekistan and the Republic of Korea in the field of higher education has grown significantly over the past few decades. Both nations have recognized the importance of fostering international partnerships to enhance educational standards, research capabilities, and professional training. The agreements signed between the two countries aim to bring Korea’s advanced educational methodologies to Uzbekistan, contributing to the overall development of the latter’s higher education system. However, implementing these agreements comes with various challenges that need to be addressed for the successful integration of Korea’s higher education principles into Uzbekistan’s educational framework.

Challenges in Implementation

Cultural Differences in Education Systems The educational cultures in Uzbekistan and Korea differ in terms of pedagogical approaches, student-teacher dynamics, and classroom interactions. Korean higher education emphasizes technological integration, strict discipline, and a strong work ethic, while Uzbekistan’s system traditionally values more teacher-centric learning and theoretical knowledge.

Solution: Promoting cultural exchange programs for faculty and students from both countries can help bridge the gap in understanding and mutual respect for different educational practices. Workshops and joint seminars on pedagogical techniques can enhance intercultural learning.

Curriculum Adaptation While Korean universities focus on technology, engineering, and innovation, Uzbekistan's higher education system has a strong basis in humanities, natural sciences, and history. The challenge lies in aligning both systems without undermining the strengths of either. Korean methods of education may not always be suitable for direct implementation in Uzbekistan due to differences in economic structure and labor market demands.

Solution: Joint curriculum development programs should be designed, where both Uzbek and Korean educators collaborate to create a hybrid curriculum that reflects the strengths of both educational systems. This approach will ensure that students gain relevant skills that match both local and global market needs.

Administrative Hurdles The administrative structures in Uzbekistan and Korea differ significantly, particularly regarding regulations related to university governance, academic freedom, and financial autonomy. This divergence can slow the implementation process of the agreements, especially when it comes to sharing educational resources, faculty exchange, and student mobility programs.

Solution: Establishing a joint working group composed of policymakers, university administrators, and legal experts from both countries can streamline processes. This group would be responsible for addressing bureaucratic obstacles and ensuring that agreements comply with both nations' legal and educational frameworks.

Language Barriers The language of instruction presents another significant obstacle. While English is often used as a medium for international education, many students and educators in Uzbekistan are more comfortable with Russian or Uzbek, while Korean students and teachers may prefer Korean. Miscommunication due to language differences can hinder academic collaboration and knowledge exchange.

Solution: Expanding language education programs is essential. English should be encouraged as a common language of instruction, but at the same time, there should be dedicated programs for learning each other's languages. For example, offering Korean language courses in Uzbekistan and Uzbek language courses in Korean universities can facilitate smoother communication.

Practical Solutions and Opportunities

Technology Transfer and Infrastructure Development Korea's strength in digital and technological education can be harnessed to enhance Uzbekistan's infrastructure. With the global trend toward digital education, Uzbekistan can benefit from Korea's expertise in e-learning platforms, smart classrooms, and online education.

Solution: Implementing technology transfer initiatives where Korean universities help set up e-learning platforms in Uzbekistan would boost access to higher education in rural and underserved regions. Collaborative projects on ICT development can further enhance the technical proficiency of Uzbek students and educators.

Research Collaboration Joint research between Uzbek and Korean universities holds tremendous potential, especially in fields like engineering, renewable energy, and biotechnology. However, the current lack of research funding and infrastructure in Uzbekistan poses a problem.

Solution: Establishing joint research funds and bilateral research initiatives can encourage collaborative projects between the two countries. Additionally, scholarships and grants aimed at Uzbek researchers to conduct studies in Korea could further strengthen academic collaboration.

Scholarship and Exchange Programs Student and faculty exchange programs between Uzbekistan and Korea can play a pivotal role in implementing the principles of higher education. These programs, however, face limitations due to logistical issues such as visa requirements, accommodation, and financial support.

Solution: Expanding scholarship programs and creating a dedicated support system for exchange students can alleviate these problems. Both governments should consider streamlining visa processes and providing adequate funding for exchange initiatives, ensuring that more students and faculty can benefit from these opportunities.

Accreditation and Degree Recognition Differences in the accreditation systems between the two countries can create problems when it comes to the recognition of degrees. Without mutual recognition of degrees, students may face difficulties in continuing their education or finding employment in either country.

Solution: Bilateral agreements on degree recognition should be formalized, ensuring that students who complete their studies in one country can have their degrees recognized in the other. Harmonizing accreditation standards can make this process smoother.

Conclusion

The partnership between Uzbekistan and the Republic of Korea in the field of higher education holds immense promise. However, several challenges—such as cultural differences, curriculum adaptation, administrative hurdles, and language barriers—must be addressed to realize the full potential of this collaboration. Through joint curriculum development, research partnerships, exchange programs, and technological initiatives, both countries can enhance their higher education systems and foster a strong educational relationship. Addressing these issues with targeted

solutions will ensure the successful implementation of the agreements and the practical application of modern educational principles.

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AHOLINI TEXNOGEN OBYEKTLARDAGI ZAHARLI MODDALARNING SALBIY OQIBATLARIDAN MUHOFAZA QILISH

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Samarqand viloyat favqulodda vaziyatlar boshqarmasi hayot faoliyati xavfsizligi o‘quv markazi

Annotatsiya. Ushbu maqolada is gazi, uni texnogen xususiyati, salbiy oqibatlari, atmosfera havosi tarkibidagi is gazi miqdorini aniqlash hamda Samarqand davlat universiteti Biokimyo institutida ushbu borada amalga oshirilayotgan ishlar to’g’risida fikrlar muhokoma qilingan.
Tayanch so’zlar: Tabiat, usullar, konsentratsiya, sensor, gaz analazator, yonuvchan gazlar, gazlar aralashmasi, termokatalitik usul, past va yuqori bosim.

O‘zbekiston Respublikasi Vazirlar Mahkamasining 242, 427,455,754- sonli qarorlarida texnogen tusdagi favqulodda vaziyatlar, favqulodda vaziyatga olib keluvchi asosiy sabablar, zaharli va portlovchi gazlar va ularnig salbiy oqibatlari bo’yicha topshiriqlar bayon etilgan. Bugungi kunda dunyo miqyosida avtotransport va sanoatning jadal rivojlanishi bilan atmosfera havosi tarkibini nazoratiga talab ortib bormoqda. Uglerod (II) oksidi (is gazi) atmosfera havosining zaharli va portlovchan tarkibiy qismlaridan biridir. Ma’lumki is gazi (uglerod II oksidi) - rangsiz, hidsiz zaharli birikma bo‘lib, ko‘mir, tabiiy va sintetik birikmalarning gaz, o‘tin, benzin va boshqa chala yonishi natijasida hosil bo‘ladi. U yer yuzida energiyaning jadal ishlatilishidan yuzaga keluvchi, tabiatda eng ko‘p tarqalgan zaharlovchi gazlardan biridir.

Turli yoqilg‘ilardan foydalanish natijasida aholi o‘rtasida is gazidan zaharlanish hamda havo-gaz aralashmasi portlashi bilan bog‘liq favqulodda vaziyatlar ko‘p kuzatilmoqda. Yoqilg‘ining chala yonishi natijasida umuman zararsiz hisoblangan karbonat angidrid hosil bo‘lishi o‘rniga is gazi paydo bo‘ladi. Is gazi hosil bo‘lishining asosiy sababi turli yoqilg‘ining yonish jarayoni uchun kerak bo‘lgan kislorodning yetishmasligida bo‘ladi. Is gazining xavfliligi uni hech qanaqa hidga ega emasligida. Is gazining havodagi eng kam miqdori ham undan zaharlanishga olib keladi. Nafas olinayotgan havo tarkibida 0,1 foiz is gazining bo‘lishi insonni o‘lim holatiga olib kelishi mumkin. Dunyo olimlarining statistik ma’lumotlariga ko‘ra, is gazidan zaharlanish tufayli o‘lim ko‘rsatkichlari alkogoldan vafot etishdan so‘ngi ikkinchi o‘rinni egallaydi. Tutun tarkibida 3%, ishlangan gazda 13%, portlovchi

gazlar tarkibida 50-60% gacha is gazi bo‘ladi , ko‘p uchraydigan zaharli birikma tabiiy gaz, yoqilg‘i, ko‘mir, o‘tin cho‘g‘lari to‘liq yonmasligi, chala yonishi oqibatida vujudga keladi. Is gazidan qator organik moddalar (atseton, metil spirt, fenol va boshqalar) ni sintez qilish uchun foydalaniladigan korxonalarda, avtoulovlar turar joylarida ventilyatsiya yomon bo‘lganda, yangi bo‘yalgan shamollatilmaydigan xonalarda, shuningdek, uy sharoitlarida tabiiy gaz chiqib turganda va pechka bilan isitiladigan uylar, hammomlarda, dam olish palatkalarida isinish uchun cho‘g‘ olovlari va boshqalardan foydalanganda yonish mahsulotining to‘liq yonmasligi natijasida zaharlanib qolish ehtimoli juda yuqori hisoblanadi[1].

Is gazi organizmga nafas a’zolari orqali ta’sir etadi. Ushbu gaz kislorodga nisbatan 300 marta tez va ko‘proq gemoglabinga birikish xususiyatiga ega bo’lgani uchun shuning uchun juda mahkam birikma-karboksigemoglobin hosil qiladi. Oqibatda gemoglabinning to‘qimalarga kislorod tashish xususiyati juda pasayib, gipoksiyaga, og‘ir zaharlanganda anoksiyaga olib kelishi mumkin. Is gazining tarkibida temir moddasi bo‘lib, u nafas olish fermentini parchalaydi. Bu o‘z o‘rnida, to‘qimalarning nafas olish faoliyatiga salbiy ta’sir ko‘rsatadi. Is gazi bilan zaharlangan organizmda uglerod va oqsil almashinuvi buziladi, natijada, atsidoz alomatlari yuzaga keladi. Bosh miyada bosimning oshishi kuzatiladi[2].

Organizmga kislorod yetishmasligi oqibatida markaziy asab tizimi faoliyati buziladi. Shuningdek, tabiiy gazning xonada to‘planishi oqibatida yong‘in yoki portlash sodir bo‘lishi mumkin. Is gazi bilan zaharlangan odamni zudlik bilan toza havoga olib chiqish zarur, nafas olishi to‘xtab qolganda sun’iy nafas berish lozim. Bu tadbir bemor mustaqil nafas olgunga qadar yoki biologik o‘lim alomatlari paydo bo‘lguncha davom ettiriladi. Badanni ishqalash, oyoqlarga grelka qo‘yish, qisqa vaqt nashatir spirt bug‘larini hidlatish (nashatir spirti bemor burnidan kamida 1 sm uzoqlikda shimdirilgan paxta yoki dokada bo‘lishi shart, aks holda spirtning o‘tkir hidi bemorni shol holatiga olib kelishi mumkin) zaharlanish oqibatlarini tugatishga imkon beradi. Zaharlanib qolgan odamni zudlik bilan kasalxonaga olib borilishi lozim, chunki birmuncha keyinroq o‘pka va asab tizimida og‘ir asoratlar vujudga kelishi mumkin. Agar bemor hushida bo‘lsa, tananing yuqori qismini qisib turuvchi kiyimlardan bo‘shatiladi, issiq choy, qahva ichiriladi. Har qanday is gazidan zaharlanish darajasida bemorlar shoshilinch holda reanimatsiya yoki toksikologiya bo‘limiga yotqiziladi. Kasalxonadan chiqqan bemorlar terapevt va nevropatolog kuzatuvida bo‘lishi shart, aks holda keyinchalik uning asoratlari yuzaga chiqishi mumkin. Shamollatish tizimi yaxshi ishlamaydigan organik moddalar ishlab chiqaradigan korxonalar, avtoturargohlar, yangi bo‘yalgan va shamollatilmagan xonalarda, pechka bilan isitiladigan uylar, hammomlar, dam olish palatkalarida, shuningdek, uy sharoitlarida tabiiy gaz chiqib turganda yonuvchi moddaning to‘liq yonmasligi oqibatida is gazidan

zaharlanish mumkin. Is gazining eng kam miqdori ham zaharlanish uchun yetarli bo‘ladi. Inson o‘zida holsizlanish alomatlarini his qilmagunicha uning borligini sezmaydi[3].

Is gazidan zaharlanishning asosiy belgilari**:** uyquga tortish, bosh og‘rig‘i, nafas olishning og‘irlashishi, yo‘tal, puls va AB ortishi. Shamollatish tizimi yaxshi ishlamaydigan xonalarda, yonuvchi moddaning to‘liq yonmasligi natijasida is gazidan zaharlanish xavfi yuqori bo‘ladi. Is gazi organizmga tushganda u qon tarkibidagi gemoglabin va kislorod tashuvchi eritrotsitlarni bog‘lab, kislorodning tana bo‘ylab harakatlanishini cheklaydi. Gemoglabinga kislorodga nisbatan 300 marotaba tez va ko‘proq birikish xususiyatiga ega, qonda gemoglabin bilan karboksigemoglabin hosil qiladi. Oqibatda gemoglabinning to‘qimalarga kislarod tashish xususiyati juda pasayib ketadi. Is gazidan zaharlanishdan so‘ng gemoglabin xujayralarini tiklash uchun ko‘p vaqt talab etiladi. Uglerod II oksididan zaharlanish qisqa muddatda yoki sekinlik bilan yuzaga chiqishi mumkin. Bu o‘sha muhitda havo tarkibidagi gaz konsentratsiyasiga bog‘liq. Agar uning miqdori kam bo‘lsa, insonda mushaklar bo‘shashishi, bosh aylanishi va og‘riq, ko‘krak qafasidagi og‘riqlar, quloqlarda shovqin, eshitish qobiliyatining yo‘qolishi, ko‘ngil aynishi, qusish, uyquchanlik kuzatiladi. Yuqori konsentratsiyada zaharlanish tezda yuzaga chiqadi va hushdan ketish, tutqanoqlar, nafas to‘xtashi bilan namoyon bo‘ladi. Eng yomoni, nafas markazining falajlanishi oqibatida o‘lim holati yuz berishi mumkin. Ba’zida zaharlanishdan 2–3 hafta o‘tib ham bemorlarning vafot etish holatlari qayd etilgan. Juda yuqori konsentratsiyalarda zaharlanish tezda yuzaga chiqadi, hushdan ketish va nafas to‘xtashi bilan namoyon bo‘ladi. Is gazidan zaharlanishga sabab bo’ladigan omillar quyidagilar:

-gaz va muqobil yoqilg‘i (ko‘mir, o‘tin va boshqa) turlaridan foydalanishda xavfsizlik qoidalariga rioya etmaslik;

-nostandart (qo‘lbola yasalgan) yoki sertifikatga ega bo‘lmagan isitish pechlari va anjomlaridan foydalanish;

-dudbo’ronlarni noto‘g‘ri o‘rnatish;

-gaz yoki boshqa muqobil yoqilg‘iga moslashtirilgan isitish pechlari hamda gaz ballonlarini uxlash xonalariga olib kirish;

-havo almashmaydigan xonalarni isitishda ochiq olov (ko‘mir va o‘tin cho‘g‘lari)dan foydalanish;

-havoni almashtiruvchi shamollatish tuynuklarni berkitib qo‘yish;

-yetarli havo aylanmaydigan sharoitda gazga moslashtirilgan qurilmalarning havoni tortish mexanizmi ishdan chiqishi yoki ventilyatsiya kanallariga havo yetarlicha kirib turishi;

-dvigatelni cheklangan joyda, masalan, garajdagi mashinada ishlatish;

-gaz moslamasida to‘g‘ri o‘rnatilgan havo aylantirish tizimining mavjud emasligi;
-gaz plitasidan binoni isitish va uning ustida kiyimlarni quritishda foydalanish;
-gaz plitasini yoqilgan holatda nazoratsiz tashlab qoldirish;
-gaz ballonlarini issiqlik manbaiga yaqin joyda qoldirish;
-bolalarni gaz uskunalaridan foydalaniluvchi joylarda nazoratsiz qoldirish;
quvurlardan tabiiy gaz sizib chiqishi;
-pechlar qopqog‘ini yopmaslik holatlarida is gazidan zaharlanish mumkin. Yonish maydonida yetarli kislorod bo‘lmasa, zaharlanish istalgan muhitda, hatto gaz plita pechi ishlab turganda ham sodir bo‘lishi mumkin.

Is gazidan zaharlanishning oldini olish yonish jarayonini to‘g‘ri tashkil etish bilan birga uni havoda hosil bo‘lganligini ogohlantirishdan iborat. Bu esa turli kimyoviy sensorlar yordamida amalga oshiriladi. Shu sababli gaz sezgir elementlarning yangi avlodini yaratish va ular asosida atmosfera havosi, texnologik va chiqindi gazlardagi uglerod (II) oksidi miqdorini aniqlashni ta’minlovchi selektiv gaz sensorlarini ishlab chiqish muhim masalalardan hisoblanadi. Sharof Rashidov nomidagi Samaqand davlat universiteti Biokimyo instituti gazlar analizi laboratoriyasida gazlar analizi sohasida keng qamrovli tadqiqotlar olib borilmoqda. Ushbu tadqiqotlar natijasida vodorod, ammiak, metan, vodorod sulfidi, is gazi, etil spirti, vodorod ftoridi singari zaharli va portlovchan gazlarning nazorati uchun kimyoviy sensorlar yaratilgan va bu sensorlarga 20 dan ortiq patentlar olingan. Tadqiqotlar Respublikamizning ishlab chiqarish korxonalari, ilmiy tadqiqot institutlari va oliy ta’lim muassasalari bilan hamkorlikda olib borilmoqda.

Ilmiy tadqiqot laboratoriyalarida ishlab chiqilgan qator sensorlar Respublikamizning ishlab chiqarish korxonalariga tatbiq etilgan. Ishlab chiqilgan is gazini va tabiiy gazni aniqlovchi sensorlar asosida tayyorlangan signalizatorlar hozirgi kunda chet ellarda ishlab chiqiladigan analoglaridan qolishmaydi va yopiq ekologik tizimlarda is gazini va tabiiy gazni to‘planishi natijasida yuzaga keluvchi zaharlanish va yong‘in kelib chiqish singari baxtsiz holatlarning oldini olish imkonini beradi. Jahonda zaharli va portlovchan gazlarning sensorlari uchun yuqori samarali gaz sezgir materiallarni yaratish borasida keng qamrovli tadqiqotlar olib borilmoqda. Respublikamizda ham atrof-muhit obyektlari tarkibining nazoratiga alohida e’tibor qaratilib, atmosfera havosi tarkibini nazorat qilish usullari va asboblarini yaratish bo‘yicha muayyan natijalarga erishilmoqda.

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FEATURES OF THE COURSE AND TACTICS FOR THE MANAGEMENT OF PATIENTS WITH DYSPLASTIC CONDITIONS OF THE CERVIX DUE TO VAGINAL MICROBIOCENOSIS DISORDERS

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Цель: Определить оптимальную тактику ведения и изучить особенности ведения пациенток с диспластическими изменениями шейки матки, выявленными на ранних стадиях скрининга шейки матки на фоне бактериального вагиноза и ИПВ-инфекции.
Материал и методы: В исследовании приняли участие 47 женщин в возрасте от 19 до 49 лет. Все пациенты были разделены на 2 группы. Первую группу составили 27 пациентов с АСК-УЗИ (эпителиальные клетки с атипией неизвестного значения) цитологического заключения. Во вторую группу вошли 20 женщин с интраэпителиальными изменениями низкой степени злокачественности (LSIL).
Результаты: Наиболее частое нарушение биоценоза влагалища у обследованных женщин обеих групп связано с концентрацией Candida albicans (46%) выше 108. Следующими по частоте являются Mycoplasma hominis (25%) и Gardnerella vaginalis (16,5%). В единичных случаях обнаружены Escherichia coli, стафилококки и Prevotella bivia.
Выводы: Персистирующая инфекция ИПВ, вызванная высокоонкогенными видами, способствует развитию диспластических процессов и рака шейки матки. В процессе формирования ЦИН ИПВ, обладающая высоким раковым риском, поражает столбчатый эпителий зоны трансформации и стволовые клетки, расположенные под эндоцервиксом. Вирус использует для размножения метапластический эпителий, в том числе в эндоцервикальных криптах, а при нарастании генетических заболеваний начинает размножать эпителиальные клетки.
Ключевые слова: цервикальная дисплазия, бактериальный вагиноз, папилломавирусная инфекция, микробиоценоза влагалища.

Objective: To determine the optimal management tactics and study the features of managing patients with dysplastic changes in the cervix, detected in the early stages of cervical screening in the context of bacterial vaginosis and HPV infection. ***Material***

and Methods: The study involved 47 women aged 19 to 49 years. All patients were divided into two groups. The first group consisted of 27 patients with an ASC-US (atypical squamous cells of undetermined significance) cytological diagnosis. The second group included 20 women with low-grade squamous intraepithelial lesions (LSIL). ***Results:*** The most common disorder of vaginal biocenosis among the women in both groups was a high concentration of *Candida albicans* (46%) above 10^8. The next most frequent findings were *Mycoplasma hominis* (25%) and *Gardnerella vaginalis* (16.5%). *Escherichia coli*, staphylococci, and Prevotella bivia were found in isolated cases. ***Conclusions:*** Persistent HPV infection caused by highly oncogenic strains contributes to the development of dysplastic processes and cervical cancer. During the formation of CIN, HPV, which has a high cancer risk, affects the columnar epithelium of the transformation zone and the stem cells located beneath the endocervix. The virus uses the metaplastic epithelium for replication, including in endocervical crypts, and with the increase of genetic mutations, it begins to induce abnormal epithelial cell reproduction.

Keywords: cervical dysplasia, bacterial vaginosis, human papillomavirus infection, vaginal microbiocenosis.

Microbiocenosis refers to a stable community of microorganisms in a specific environment. The existence of microbiocenosis in the skin has been known for a long time. The vaginal mucosa, vaginal microflora, and vaginal secretions form an integrated but dynamic ecosystem.

The microflora includes many microorganisms that form a relatively stable community, as well as bacteria (transient microorganisms) that enter from the environment. Temporary microbes are unable to survive in the genital mucosa for long and generally do not cause pathological conditions if natural resistance mechanisms and immune responses maintain barrier functions and prevent excessive microbial reproduction. It is known that the normal vaginal microbiome is dominated by lactobacilli, which help prevent the development of vaginal infections by producing lactic acid, hydrogen peroxide, and bacteriocins, while also outcompeting harmful microorganisms [1, 2, 3].

For women's reproductive health, population stability and normal microbiocenosis are essential components. The well-organized function of these mechanisms, also known as colonization resistance, protects against sexually transmitted infections (STIs) and the overgrowth of opportunistic microorganisms [3].

Most representatives of the normal microflora, such as Lactobacillus and *Bifidobacterium* species (making up 80-90% of the flora), do not cause inflammation due to the absence of pathogenic factors. These bacteria act as a buffer that limits the growth of opportunistic microorganisms (which make up 10-20% of

the microflora) and the spread of pathogens.

Protective mechanisms of colonization resistance include:

- healthy competition with foreign microorganisms for nutrients;
- production of antimicrobial substances (e.g., short-chain fatty acids, peroxides, bacteriocins, lysozyme);
- neutralization of microbial xenobiotics via adsorption and biotransformation.
- blocking of adhesion receptors;
- stimulation of immune responses against pathogens;
- production of immunostimulants and activators of phagocytic and enzymatic activity;

Protection against exogenous (e.g., gonococci, chlamydia) and endogenous opportunistic microorganisms is also provided by other physical and chemical factors: the acidic vaginal environment, which is essential for normal microflora function and acts as an antipathogenic barrier, and the production of antimicrobial substances like lysozyme and lactoferrin.

When dysbiosis occurs, these protective mechanisms are disrupted, breaking down barriers to bacterial infections. When lactobacilli levels drop, over ten known colonization resistance mechanisms disappear. Facultative opportunistic bacteria, at high titers, exhibit invasive potential and can induce an inflammatory response.

The formation of bacterial infections proceeds as follows: Initially, a dysbiotic process develops in the vagina due to adverse factors like weakened immunity, hormonal imbalances, or infection with STIs. Disruptions in the interaction between the microflora and genital tissues are often accompanied by damage to mechanisms that maintain local immunity, while apoptosis weakens.

Increased cell survival leads to the accumulation of chromosomal aberrations in the nuclei of infected epithelial cells. This is further exacerbated by certain facultative microbiota, such as mycoplasmas, which inhibit nucleic acid biosynthesis, leading to DNA damage. These processes, in turn, may trigger autoimmune reactions, tumorigenesis, and secondary infections in affected tissues. It is no coincidence that bacterial vaginosis is now linked to an increased risk of carcinogenic processes in the cervix [4, 5, 6, 7].

Cervical intraepithelial neoplasia (CIN) is a precancerous condition of the cervix. In women of reproductive age, the prevalence of cervical pathology is 17-29% [1, 4].

The development of the neoplastic process in cervical epithelium is linked to human papillomavirus (HPV) infection. HPV infection in epithelial tissues leads to the integration of viral DNA into the cell genome and subsequent expression of viral oncogenes (E6 and E7). This initiates a viral carcinogenesis model. In transformed cells, complex, multistep mechanisms of genetic mutations are activated, disrupting

cell cycle regulation [2].

Intraepithelial neoplasia of the cervix is often a morphological response to chronic vaginal inflammation linked to disturbed microbiocenosis. Different infectious agents typically coexist. Most patients with CIN present with a combination of infections, highlighting significant microbiocenosis disruption, which in turn may impair regenerative processes in the cervical squamous epithelium [6].

Therefore, the dominant factor in CIN development is a chronic infectious process, forming the pathogenic basis for cervical intraepithelial neoplasia. In many countries, cytological screening is the primary method due to its cost-effectiveness. The Bethesda system, developed to standardize terminology in economically developed countries, is used to describe cytological findings. This system accurately determines further diagnostic and treatment recommendations. According to this classification, CIN is categorized as LSIL or HSIL based on the severity of intraepithelial lesions.

Objective: To determine the optimal management tactics and study the features of managing patients with dysplastic changes in the cervix, detected in the early stages of cervical screening in the context of bacterial vaginosis and HPV infection.

Research materials and methods: In the study, 47 women aged 19 to 49 years old with an abnormal cytological appearance of the cervical sample taken during examination at the polyclinic of the consultation polyclinic of the Republican Specialized Maternal and Child Health Scientific and Practical Medical Center "Family and Marriage" a woman participated. All patients were divided into two groups. The first group consisted of 27 patients with an ASC-US (atypical squamous cells of undetermined significance) cytological diagnosis. The second group included 20 women with low-grade squamous intraepithelial lesions (LSIL).

As part of the comprehensive examination of patients with diseases of the female genital organs, a cytological examination was performed for women on the initial request for specialized medical care. At the preanalytical stage of cytological research, a special Cervex-Brush® Combi brush was used to properly collect the material, its removable part was placed in a preservative medium, and the traditional method of smear preparation prevents it from losing the properties of the cellular material. Thin-layer cytological preparations obtained in a cytocentrifuge were stained according to the method of G. N. Papanicolaou with gradual application of hematoxylin according to Harris, Papanicolaou OG6 and EA50. The received cytological preparations were placed under the cover. The study was carried out using a light microscope AxioScope A.1 (Carl Zeiss, Germany) x100 to x1000 magnification. The results of the study were evaluated according to the Bethesda terminological classification. All obtained cytological preparations are of appropriate quality and contain a sufficient amount of metaplastic cells of the transformation zone

and/or cervical gland epithelium.

To determine the composition and quantitative ratio of the microflora of the genital organs, molecular biological studies were conducted using the polymerase chain reaction method. The examination included 16 indicators (total bacterial mass, normal flora – Lactobacillus spp., Enterobacterium spp., Staphylococcus spp., Streptococcus spp., Gardnerella vaginalis, Porphy- romonas spp., Prevotella bivia, Sneathia spp., Eu- bacterium spp., Leptotrihiaspp., Megasphaera spp., Dialister spp., Veilonella spp., Clostridium spp., Lachnobacterium spp., Mobiluncus spp., Corynebacterium spp., Peptostreptococcus spp., Ureaplasma (urealyt- icum + parvum), Mycoplasma (hominis + genitalium), Candida spp. The test for human papillomavirus (types 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59) with high carcinogenic risk was carried out using the PCR method with specific primers.

Research results:

The most frequent violation of the vaginal biocenosis in examined women in both groups is associated with the concentration of Candida albicans (46%) higher than 108. The next frequency is Mycoplasma hominis (25%) and Gardnerella vaginalis (16.5%). In isolated cases, Escherichia coli, staphylococci and Prevotella bivia were detected.

Results of clinical and laboratory examination of patients with abnormal cytological image

Criteria	**Types of cytological findings**			
	ASC-US (n=27)		**LSIL (n=20)**	
	Abs	**%**	**Abs**	**%**
Sexual infections				
Bacterial vaginosis	**17**	**63**	**16**	**80**
IPV	**18**	**67**	**19**	**95**
Genital candidiasis	**8**	**30**	**4**	**20**
Trichomoniasis	**-**	**-**	**1**	**5**
	-	**-**	**-**	**-**
Colposcopic image:				
Abnormal severity level 1	**10**	**37**	**12**	**60**
Abnormal severity level 2	**-**	**-**	**4**	**20**

non-specific sign	**4**	**15**	**4**	**20**
inadequate	**13**	**48**	**-**	**-**
Transformation zone				
I	**6**	**22**	**9**	**45**
II	**4**	**15**	**5**	**25**
III	**8**	**30**	**3**	**15**

Escherichia coli, Staphylococcus and *Prevotella bivia* were found in isolated cases. Associations of pathogenic and conditionally pathogenic microflora were often observed (Table 1). At the same time, the detection rate of IPV with high oncogenic risk was 2 times higher in the group of patients with LSIL.

Half of the patients in the first group had a mild degree of cervical epithelial dysplasia, 10% anomalous severity level 1 colposcopic image.

During the extended colposcopy in the second group, 60% of patients had an anomalous weight level 1 colposcopic image. In most of the patients in this group, the colposcopic image has non-specific signs, in 1/3 it was insufficient, which is related to the intensity of the inflammatory process and changes in the cervix. At the same time, 1/5 of the patients in the second group had a transformation zone of type I-II, which made it difficult to diagnose the pathological process of the cervix. In patients with a nonspecific colposcopic image, various degrees of leukoplakia may be hidden under the layer. Therefore, multifocal biopsy was performed for patients with type I or II transformation zones. Cervical excision was performed in patients with type III transformation zone.

In the second group, the presence of abnormal colposcopic picture was determined by clear changes of grade II in the form of a thick layer of aceto-white epithelium, rough mosaic and tuberose of the epithelial layer.

All patients underwent etiotropic therapy, taking into account the identified pathogens, as well as ablative procedures for types I and II of the transformation zone and excision procedures of type III, as well as drugs aimed at restoring vaginal microbiocinosis (probiotics, immunity). but correctors). Women diagnosed with HPV infection were treated with antiviral and immunostimulating drugs along with drugs aimed at restoring vaginal biocenosis.

After 3-6 months of treatment, patients in both groups underwent repeated cytological examination and expanded colposcopy. Regression of cytological signs of ASC-US and LSIL was observed in more than 90% of cases and was associated with elimination of the infectious agent and regression of abnormal colposcopic images. In 20 women with signs of cytological atypia, colposcopy was performed with biopsy and control histological examination, if the abnormal signs of the colposcopic image

remained, morphological signs of immature metaplasia in 11 cases, leukoplakia without signs of dysplasia in 2 cases, and IPV infection in 6 cases. CIN I was confirmed by histological signs, CIN II in 1 case.

Some patients have persistent IPV infection and recurrence of bacterial vaginosis. The number of these women in the group with a previously diagnosed LSIL cytological image was higher than in the first group, which may indicate an initially torpid combined course of the infectious process or be determined by compatibility factors during therapy.

Conclusions: Persistent IPV infection caused by highly oncogenic species contributes to the development of dysplastic processes and cervical cancer. In the process of CIN formation, IPV with a high cancer risk affects the columnar epithelium of the transformation zone and the stem cells located under the endocervical. The virus uses metaplastic epithelia for reproduction, including in endocervical crypts, and with the increase of genetic diseases in them, it initiates the proliferation of β-epithelial cells. Infection of cervical epithelial cells with IPV is necessary, but not sufficient, for their malignancy.

In addition, the pH level of vaginal contents, in turn, depends on Lactobacillus spp. and affects the process of squamous metaplasia. Thus, the presence of at least one and possibly multiple infections together with IPV accelerates the development of CIN and is a risk factor for invasive cervical cancer.

The results of the study showed that for CIN I, it is necessary to adhere to conservative treatment tactics with mandatory control in the form of a combined test (cytological examination + IPV test) and extended colposcopy. Targeting or biopsy after extended colposcopy should take into account the nature of the transformation zone and the presence of highly oncogenic IPV infection.

The tactics of treatment of patients of reproductive age with histologically confirmed CIN I in the ambulatory stage should be aimed at conservative treatment and normalization of the vaginal biocenosis, which helps to implement the soft, organ-preserving principles of therapy.

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ПРОБЛЕМЫ И РЕШЕНИЯ В ОБЛАСТИ КРИПТОГРАФИИ И ШИФРОВАНИЯ ДАННЫХ

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Аннотация: *В данной статье рассматриваются актуальные проблемы криптографии и шифрования данных, с которыми сталкиваются современные информационные системы. Обсуждаются существующие методы защиты информации, их недостатки, а также предлагаются новые подходы для повышения уровня безопасности данных. В ходе исследования проведен анализ существующих алгоритмов шифрования и протоколов безопасности, а также предложены рекомендации по их улучшению. Рассматриваются практические применения криптографических технологий в различных областях, а также результаты исследований, направленных на решение выявленных проблем.*
Ключевые слова: *криптография, шифрование, безопасность данных, уязвимости, методы защиты.*

ВВЕДЕНИЕ

С развитием информационных технологий и увеличением объемов передаваемых данных возрастает необходимость в надежной защите информации. Криптография и шифрование данных становятся ключевыми инструментами для обеспечения конфиденциальности, целостности и доступности информации. Цель данного исследования заключается в анализе существующих проблем в области криптографии и шифрования данных, а также в разработке рекомендаций по их решению. Объектом исследования являются методы и технологии криптографической защиты информации, а предметом — современные алгоритмы шифрования и протоколы безопасности, а также их применение в различных сферах.

Исторический контекст криптографии

Криптография имеет долгую историю, начиная с древних времен, когда использовались простые шифры, такие как шифр Цезаря. В Средние века шифры становились все более сложными, и с развитием технологий шифрования, таких как шифр Виженера, возникли новые методы защиты информации. В XX веке, с появлением компьютеров, криптография перешла на новый уровень, что привело к разработке современных алгоритмов, таких как DES и AES.

Обзор существующих методов

Криптография и шифрование данных играют важную роль в обеспечении безопасности информации. Существующие методы защиты, такие как симметричное и асимметричное шифрование, имеют свои преимущества и недостатки:

1. Симметричное шифрование (например, AES) обеспечивает высокую скорость обработки данных, но требует безопасной передачи ключа.
2. Асимметричное шифрование (например, RSA) позволяет избежать проблем с передачей ключей, однако имеет более низкую скорость.

В последние годы наблюдается рост интереса к постквантовым алгоритмам, которые должны обеспечить безопасность в условиях квантовых вычислений (NIST, 2022). Исследования показывают, что традиционные методы шифрования могут быть уязвимы к атакам с использованием квантовых компьютеров, что подчеркивает необходимость разработки новых подходов (Shor, 1994). Недавние исследования также подчеркивают важность новых алгоритмов и методов, таких как гомоморфное шифрование, которое позволяет выполнять вычисления над зашифрованными данными без их расшифровки (MDPI, 2023). Анализ современных алгоритмов, таких как AES и RSA, показывает, что их безопасность может быть улучшена за счет внедрения новых подходов к аутентификации и обмену ключами (MDPI, 2023).

Современные угрозы безопасности

Современные информационные системы сталкиваются с множеством угроз, которые могут подорвать безопасность данных. К ним относятся:

- Фишинг: мошеннические попытки получить конфиденциальную информацию, такие как пароли и номера кредитных карт, путем маскировки под надежные источники.
- Атаки нулевого дня: уязвимости в программном обеспечении, которые становятся известны злоумышленникам до того, как разработчики выпустят патч.
- Вредоносное ПО: программы, созданные для повреждения или получения несанкционированного доступа к системам.

Эти угрозы подчеркивают необходимость постоянного обновления и улучшения криптографических методов защиты.

Анализ уязвимостей

Существующие криптографические системы подвержены различным атакам, включая:

- Атаки на основе анализа времени.
- Атаки с использованием квантовых вычислений.
- Атаки на основе уязвимостей в протоколах обмена ключами.

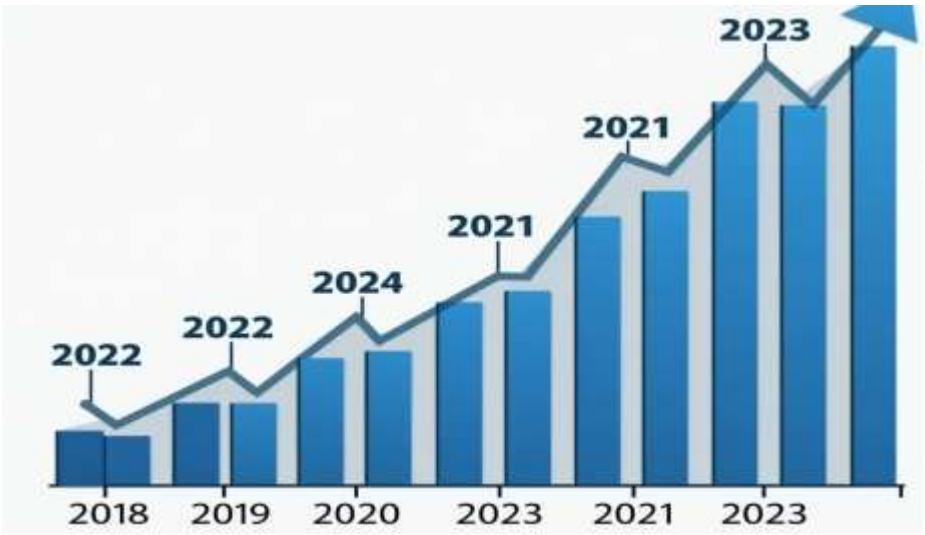
Например, атаки на RSA могут быть осуществлены с использованием методов факторизации больших чисел, что делает его уязвимым в условиях квантовых вычислений (Shor, 1994). Недостатки в реализации алгоритмов, такие как использование устаревших библиотек или неправильная настройка, могут привести к утечке ключей и компрометации данных.

Кейс-стадии

Рассмотрим несколько примеров реальных атак на криптографические системы:

1. Атака на RSA: В 1996 году исследователи продемонстрировали, что уязвимости в реализации RSA могут быть использованы для компрометации ключей. Это привело к пересмотру стандартов безопасности.

2. Уязвимости в SSL/TLSт: Атаки, такие как POODLE и BEAST, выявили недостатки в протоколах SSL и TLS, что привело к необходимости обновления и улучшения этих протоколов.



Линейный график, показывающий рост числа кибератак за последние годы. Ось x представляет годы (например, 2018, 2019, 2020, 2021, 2022, 2023), а ось y представляет количество кибератак (в тысячах).

Рекомендации по повышению безопасности данных

Для повышения уровня безопасности данных необходимо:

1. Использовать асимметричное шифрование для избежания проблем с передачей ключей. Протоколы обмена ключами, такие как Diffie-Hellman, могут значительно улучшить безопасность.

2. Регулярно обновлять алгоритмы шифрования и переходить на современные методы, такие как AES-256, что снижает риск успешных атак.

3. Проводить обучение пользователей по вопросам безопасности данных, что может снизить количество инцидентов на 40% (Johnson, 2020).

4. Интегрировать криптографию на уровне приложений с использованием

надежных библиотек, таких как OpenSSL, для предотвращения уязвимостей.

5. Внедрять многофакторную аутентификацию, что значительно снижает риск несанкционированного доступа.

Заключение

Криптография и шифрование данных играют ключевую роль в обеспечении безопасности информации в современном мире. Несмотря на существующие проблемы, активные исследования и внедрение новых технологий позволяют значительно повысить уровень защиты данных. Важно продолжать развивать и адаптировать методы криптографической защиты в соответствии с новыми вызовами, включая угрозы, связанные с квантовыми вычислениями. Рекомендуется также проводить дальнейшие исследования в области постквантовой криптографии и разработать стандарты для новых алгоритмов.

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MOYLI KUNGABOQARNING NAV-NAMUNALARINI RIVOJLANISH FAZALARI BO‘YICHA BAHOLASH

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Annotatsiya. Maqolada moyli kungaboqar, uning dunyoda tutgan o‘rni, mahsuldorligi, shuningdek navlari va vegetatsiya davri bo‘yicha olib borilgan ilmiy kuzatishlar natijalari haqida qisqacha ma’lumot berilgan..
Kalit so‘zlar: kungaboqar, seleksiya, nav va namunalar, o‘suv davri davomiyligi, hosildorlik.

Dunyoda yiliga o‘rtacha 56 mln. tonna kungaboqar yetishtiriladi. Shundan Rossiya Federatsiyasi yiliga 15,3 mln. tonna kungaboqar ishlab chiqarish bilan eng yirik kungaboqar ishlab chiqaruvchi hisoblanadi. Ukrainada ham 15,2 mln. tonna ishlab chiqarish bilan ikkinchi o‘rinda turadi. Bu ikki davlat dunyio bo‘yicha yetishtiriladigan kungaboqarining 50% dan ortig'ini ishlab chiqaradi.

Qishloq xo‘jaligi vazirligi ma’lumotlariga ko‘ra, 2022-yilda respublikada 61,7 ming gektar maydonga kungaboqar ekib yetishtirilgan bo‘lib, hhundan 25,7 ming gektar asosiy, 36 ming gektari ikkinchi darajali maydonlarga to‘g‘ri keladi. O‘zbekiston Respublikasi Prezidentining 2023-yil 5-apreldagi “2023-yilda qishloq xo‘jaligi mahsulotlari ishlab chiqarish, qayta ishlashni kengaytirish va qo‘llab-quvvatlashning qo‘shimcha chora-tadbirlari to‘g‘risida”dagi ”PQ-113-son qaroriga asosan 2023 yilda Respublikamizda 338,7 ming tonna yetishtirish prognoz qilingan. Respublikamizda kungaboqar asosan Qoraqalpog‘iston, Buxoro, Qashqadaryo, Namangan, Jizzax, Farg‘ona va Samarqand viloyatlarida yetishtiriladi. Bugungi kunga qadar respublikamizning turli tuproq-iqlim sharoitlariga mos kungaboqarning 51 navi Qishloq xo‘jaligi ekinlari davlat reestriga kiritilgan.

O‘simlik moyiga bo‘lgan talabning yuqoriligi hamda ichki bozordahi narxlarni barqaror ushlab turish maqsadida Davlatimiz rahbarining joriy yil 31-maydagi “Iste’mol bozorlarida narxlar barqarorligini ta’minlash va monopoliyaga qarshi chora-tadbirlar samaradorligini oshirishga doir qo‘shimcha chora-tadbirlar to‘g‘risida”gi qarori bilan 1 iyundan boshlab o‘simlik moyi, jumladan, paxta va

kungaboqar moyini eksport qilish vaqtincha taqiqlandi. Shu bilan birgalikda ushbu qararor bilan kungaboqar urug‘lari, shuningdek, boshqa moyli o‘simliklarning urug‘lari va mevalari eksporti to‘xtatildi. Bundan maqsad axolini sifatli oziq ovqat maxsulotlariga bo‘lgan talabini qondirishdan iborat.

Kungaboqar urug‘i 4-6°C da 10-15 kunda unib chiqadi. Maysasi -6° sovuqqa bardoshli (qisqa qorasovuqlarga chidaydi). Issiqlikka talabchan, yorug‘sevar, qisqa kunli, qurg‘oqchilikka chidamli, namsevar o‘simlik. Soya joyda yaxshi rivojlanmaydi. Kungaboqarning o‘suv davri ertapishar navlari uchun vegetatsiya davrining umumiy davomiyligi 70-90 kun, o‘rtapishar navlari uchun 90-120 kun, kechpishar navlari uchun 120 kundan ortiq davom etadi. Yuqoridagilardan kelib chiqib o‘simlik moyiga bo‘lgan talabning yuqoriligi dan kelib chiqib kungaboqar nav-namunalari orasidan respulikamiz tuproq iqlim sharoitlarida mos, sug’oriladigan sharoitlarida yuqori va sifatli xosil olishni ta’minlaydigan bir butun va o‘zaro uyg’unlashgan texnologik elementlar: ekish muddati, sxemasi, oziqlantirish me’yori, sug’orish rejimi kabilarning birgalikdagi ta’siri mujassamlashgan tejamkor yetishtirish texnologiyasini ishlab chiqish va uni ilmiy asoslash istiqbolli va maxalliy sharoitga mos navlarni yuqori reproduksiyali sara urug’ini yetishtirishning takomillashgan usulini joriy etish, yangi, tezpishar, pakana bo‘yli, urug’ida moy chiqimi yuqori bo‘lgan, qurg’oqchilikka, kasallik va zararkunandalarga bardoshli navlarni tanlash maqsadida ilmiy tadqiqotlar olib borilmoqda.

Tajribalarimiz natijasida moyli kungaboqarning 10 ta nav-namunalari orasidan o‘suv davri davomiyligi standart navga nisbatan qisaqa, ikkinchi ekin sifatida yetishtirishga mos namunalarni tanlandi.

Barcha nav namunalar o‘n birinchi aprelda Toshkent davlat agrar universiteti Samarqand filiali o‘quv tajriba xo‘jaligiga ekildi. Nav namunalar o‘n to‘rtinchi aprelda unib chiqdi. Tajribadagi nav namunalar o‘suv davri xar xilligi kuzatildi.

Biz dala tajribalarida o’rgangan ma’lumotlar ko’rsatishicha kungaboqar navlari unib chiqish fazasida farqlanishlar kuzatilmadi. Navlarining savatcha hosil bo’lish fazasi turli muddatlarda sodir bo’ldi. Заря, Donjose,Смена, Nomsiz, Talxe, Mahalliy, Ilm F1, Kalta poya, hamda Adozi namunalarda standart navga nisbatan savatacha paydo bo’lish fazasi 4-10 kun oldin sodir bo’lishi kuzatildi. Aksincha Karakabey namunasida standart navga nisbatan savatacha paydo bo’lish fazasi 3 kun keyin sodir bo’lishi kuzatildi. Navlararo o’zgarishlar so’ngi gullash va pishish fazalarida ham shunday navlararo farqlanishlar kuzatildi. Gullash fazasi nav namunalarda 14 maydandan to 19 iyun kunigacha davom yetishi kuzatildi Pishish

fazasi esa 16-iyundan 23- iyulgacha sodir bo'lishi kuzatildi. O'suv davri davomiyligi dala tajribalarida o'rganilgan ma'lumotlar ko'rsatishicha kungaboqar namunalari 68-100 kunni tashkil etdi.

O'tkazilgan tajribalarda kungaboqarning Samarqand viloyatining sug'oriladigan sharoitida asosiy ekin sifatida ekilib, takomillashgan texnologiya asosida o'stirilganda unda 38 sentnergacha urug' xosil olish mumkinligi, yozda takroriy ekin sifatida anigizga ekilganda uning urug' xosildorligini 25 sentnerga va gektaridan moy chiqimini gektaridan 2,0-2,5 tonnaga yetkazish mumkinligi o'rganildi.

т/р	Nav va namunalar	Ekish muddati, oy, kun	Maysalash oy, kun		Savatcha hosil qilish. oy, kun		Gullash. oy, kun.		Pishish. oy, kun.		O'suv davri, kun.
			bosh.	to'l	bosh.	to'l	bosh.	to'l	bosh.	to'l	
1.	Jaxongir (st)	11.04	13.04	17.04	18.05	23.05	02.06	13.06	04.07	09.07	89
2.	Заря	11.04	13.04	17.04	14.05	19.05	21.05	25.05	23.06	28.06	75
3.	Donjose	11.04	14.04	18.04	13.05	17.05	21.05	25.05	23.06	28.06	75
4.	Смена	11.04	13.04	16.04	11.05	16.05	19.05	23.05	21.06	26.06	73
5.	Nomsiz	11.04	14.04	16.04	10.05	15.05	22.05	26.05	24.06	29.06	76
6.	Talxe	11.04	14.04	16.04	16.05	20.05	18.05	22.05	20.06	25.06	72
7.	Mahalliy	11.04	14.04	16.04	06.05	12.05	14.05	18.05	16.06	21.06	68
8.	Karakabey	11.04	15.04	20.04	21.05	27.05	15.06	19.06	18.07	23.07	100
9.	Ilm F_1	11.04	14.04	18.04	11.05	15.05	18.05	22.05	20.06	25.06	72
10.	Kalta poya	11.04	14.04	18.04	13.05	17.05	22.05	26.05	24.06	29.06	76
11.	Adozi	11.04	13.04	18.04	16.05	20.05	19.05	23.05	21.06	26.06	73

Qisqacha xulosa qilinganda, kungaboqar navlari, navning biologiyasiga bog'liq holda rivojlanish fazalari turli muddatlarda sodir bo'ladi.

FOYDALANILGAN ADABIYOTLAR RO'YXATI

B.Eshonqulov, A.Hayitov. Boshoqli don ekinlaridan keyin moyli kungaboqar o'stirish texnologiyasi. O'zbekiston qishloq va suv xo'jaligi jurnali. Maxsus son. Toshkent 2022.–№2.

1. O'zbekiston Respublikasi Prezidentining 2023-yil 5-apreldagi "2023-yilda qishloq xo'jaligi mahsulotlari ishlab chiqarish, qayta ishlashni kengaytirish va qo'llab-quvvatlashning qo'shimcha chora-tadbirlari to'g'risida"dagi "PQ-113-son qarori.

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