

## HUMAN PAPILLOMA VIRUS (HPV) DEVELOPMENT TREATMENT MEASURES

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**Annotation:** of HPV-Induced Warts. HPV-induced warts vary in their appearance, shape, size, and location. **External Appearance** Shape: Warts can be simple, round, or flat. Size: Typically ranges between 1–10 mm but may exceed this size. Color: Usually resembles normal skin tone but can sometimes appear lighter or darker. **Tissue Structure.** Warts affect both the epidermis and dermis layers of the skin. **Epidermis:** Thickened Epidermis: The wart's surface appears elevated due to excessive cell growth. Keratinized Cells: The epidermal surface becomes dry and hard, acting as a protective barrier for the virus. Papillomatosis: Uneven thickening and enlargement of underlying epidermal layers. **Dermis:** The dermis contains blood vessels and connective tissues essential for the wart's nutrition and growth. **Key Structural Components** Papillae: Projections formed from the interaction between the epidermis and dermis, triggered by HPV activity. Capillaries: Blood vessels within the dermis provide nutrients for the wart's development. **Virus-Induced Modifications** HPV incorporates its DNA into the epidermal cells, causing abnormal cell division and leading to the growth of the wart. These structural changes reflect the virus's strategy to sustain its presence and replication within the host tissue.

**Annotatsiya:** Tashko 'rinish, so 'gallar shakli, hajmi va joylashuviga qarab farq qiladi. Shakli: Oddiy, yumaloq yoki yassi bo 'lishi mumkin. Hajmi: 1–10 mm atrofida yoki undan katta. Rangi: Odatda teri rangiga o 'xshash, ba 'zan oqarib yoki qorayib ko 'rinadi. Tuqimalar tuzilishi. So 'gal terining epidermis va dermis qatlamlarini qamrab oladi. Uning anatomik qismi quyidagilardan iborat: Epidermis qalinlashgan bo 'lib, so 'galning yuzasida ko 'pirtiradi. Keratinlashtirilgan hujayralar: Epidermis yuzasi quruq va qattiq ko 'rinishda bo 'ladi, bu virusning himoya mexanizmi. Papillomatoz: Epidermis ostidagi qavatlarining kattalashuvi va notekis rivojlanishi. Dermis Dermis qatlamida qon tomirlari va biriktiruvchi to 'qimalar joylashgan. So 'gal qon tomirlari orqali oziqlanadi, bu esa uning rivojlanishini ta 'minlaydi Asosiy tuzilma elementlari Papillalar: HPV ta 'sirida epidermis va dermis birikmasidan hosil bo 'lgan o 'smalar. Kapillyarlar: So 'galning oziqlanishi uchun dermis qavatida o 'tkazuvchi qon tomirlari mavjud. Virus keltirgan modifikatsiyalar: HPV virusining DNKsi epidermis hujayralarida ko 'payadi, natijada hujayralar notekis bo 'linadi va o 'sma shakllanadi.

**Keywords:** *Weakened immune system, Hygiene, Keratin, Dermis, Salicylic acid, Immunosuppressants, Keratolytics, Electrocautery, Electrocoagulation, Cryosurgery*

**Kalit so 'zlar:** *Zaif immun tizimi, Gigiena, Keratin, Dermis, Salitsil kislotasi, immunosupressivlar, keratolitik, Elektrotok, Elektrokoagulyatsiya, Kriojarrohlik.*

**Relevance of the Topic.** Human Papillomavirus (HPV) is a widespread concern, affecting a significant portion of the global population. The virus manifests as warts (so'gallar), which can appear on various parts of the skin depending on the HPV subtype. **Key Factors in HPV Development:** **Weak Immune System:** A weakened immune system cannot effectively combat HPV, increasing the risk of wart formation. **Contributing factors** include stress, fatigue, chronic diseases, and medications like immunosuppressants. **Poor Hygiene Practices:** HPV can spread through direct contact or shared items. **Risk factors** include walking barefoot in communal areas (e.g., pools, public showers) and using shared personal items (e.g., towels, razors). **Skin Damages.** Minor cuts, abrasions, or irritation facilitate viral entry into the skin, promoting infection. HPV warts are not only a medical concern but also a social and aesthetic issue, as their removal and management remain a challenge for many individuals. Despite advancements in treatment, this issue persists, highlighting the need for further awareness, prevention, and effective therapies.

**Mavzuning dolzarbligi:** Inson papilloma virusi (HPV) ko'pchilik insonlarni bezovta qiladi. Hozirgi kunda insonlar orasida juda ko'p uchraydi. So'galning asosiy sababi HPV hisoblanadi. Bu virusning ko'plab turlari mavjud bo'lib, ular terining turli qismlarida o'smani keltirib chiqaradi. Virus asosan shikastlangan teriga tushganda faollashadi. Immunitetning zaiflashishi. Zaif immun tizimi HPV'ga qarshi kurasha olmaydi, bu esa so'galning paydo bo'lish xavfini oshiradi. Stress, charchoq, boshqa kasalliklar yoki dorilar (masalan, immunosupressivlar) bunga sabab bo'lishi mumkin. Gigiena qoidalariga rioya qilmaslikdir. So'gal yuqumli bo'lib, boshqa odamlardan yoki umumiy foydalaniladigan narsalardan yuqishi mumkin. Masalan: Jamoat joylaridagi (hammom, basseyn) polga yalangoyoq yurish. Boshqalarning gigiena vositalarini (sochiq, ustara) ishlatish. Teri shikastlanishi mayda jarohatlar yoki tirnashlar virusning teriga kirishini osonlashtiradi. Bu insonlar orasida ancha tartibga kelgan lekin haligacha tiklanmagan muamilarimizdan biri.

**Main Section: Types and Symptoms of Warts**

Warts (so'gallar) have various forms and characteristics depending on their location and type:

**1. Common Warts (Oddiy so'gallar):**

**Appearance:** Hard and rough surface with excessive keratin.

**Location:** Often found on hands, fingers, or elbows.

**Features:** Small, rough, and firm growths.

**2. Plantar Warts (Oyoq tagi so'gallari):**

**Depth:** Penetrates deeper into the dermis and can be painful.

Location: Appears on the soles of the feet.

Features: Resembles calluses, causing discomfort while walking, and typically hard.

3. Flat Warts (Yuzaki so‘gallar):

Appearance: Smooth, soft, and flat growths.

Location: Common on the face or neck.

Features: Small, flat, and match the skin color.

4. Genital Warts (Jinsiy so‘gallar):

Appearance: Soft, smooth, and papilliform growths.

Location: Develops around the genital area.

Features: May be associated with high-risk HPV strains.

**Prevention:** Vaccines are available to reduce transmission and complications. **Treatment with Salicylic Acid:** Salicylic acid, a keratolytic agent, effectively treats warts by softening the skin’s top layer and gradually removing the growth. **Mechanism of Action:** Dissolving Keratin Layers: Warts contain thickened and hardened keratin layers. Salicylic acid breaks down these layers, loosening keratinized cells. **Eliminating Viral Cells:** Targets HPV-infected cells, stopping their division and reducing the wart’s size. **Promoting Skin Renewal:** Dissolving keratin encourages regeneration in deeper skin layers, enabling the formation of healthy epidermal cells. **Reducing Inflammation:** Possesses antiseptic properties, preventing secondary infections and reducing local inflammation. **Treatment Process:**

1. Apply salicylic acid in the form of a solution, cream, or patch to the wart surface.

2. Over several days, it softens and dissolves the keratin layers.

3. Gradually, the wart shrinks or disappears entirely.

4. Healthy skin replaces the wart over time.

This method is simple, effective, and widely accessible for managing warts.

**Asosiy Qisim.** So‘galning turlari va belgilari bir qancha bo‘ladi. Oddiy so‘gallar Keratin ko‘p bo‘lib, qattiq va puruzli yuzaga ega.

1. Qo‘l, barmoqlar yoki tirsaklarda uchraydi. Qo‘pol, qattiq yuzali va kichik o‘sma bo‘lib ko‘rinadi.

2. Oyoq tagi so‘gallari Dermisga chuqurroq o‘sadi, og‘riqli bo‘ladi va kallusga o‘xshab ketadi. Oyoq tagida paydo bo‘ladi, yurishda noqulaylik tug‘diradi. Ko‘pincha qattiq bo‘ladi.

3. Yuzaki so‘gallar .Teri bilan bir xil darajada, silliq va yumshoq tuzilishga ega. Yuz yoki bo‘yinda paydo bo‘ladi. Yassi, mayda va teri rangiga mos bo‘lgan o‘sma.

4. Jinsiy so‘gallar. Yumshoq va silliq yuzali, papilliform o‘sma shaklida.

Jinsiy a‘zolar atrofida paydo bo‘ladi. HPV’ning yuqori xavfli turlari bilan bog‘liq bo‘lishi mumkin. Ayrim HPV turlari uchun vaksinalar mavjud bo‘lib, ular virusning yuqishini oldini oladi. Oddiy usullardan biri teri shikastlanishidan saqlanish Salitsil kislotasi — keratolitik vosita bo‘lib, u terining yuqori qatlamini yumshatadi va

soʻgallarni asta-sekin yoʻq qiladi. Ushbu jarayon quyidagicha amalga oshadi: Keratin qatlamini eritadi. Soʻgalning yuzasida qalinlashgan va qattiqlashgan keratin qatlami mavjud. Salitsil kislotasi bu qavatni eritib, oʻsmadagi keratinlashtirilgan hujayralarni boʻshashtiradi. Bu soʻgalni parchalash va undan qutulishni osonlashtiradi. Virusli hujayralarni yoʻq qiladi. Salitsil kislotasi HPV infeksiyalagan hujayralarni ham yemiradi. Bu hujayralarning boʻlinish va koʻpayishini toʻxtatib, soʻgalni kichraytiradi. Yangilanishni ragʻbatlantiradi keratin qatlamining eritilishi terining pastki qatlamlarida yangilanish jarayonini boshlaydi. Epidermisning yangi, sogʻlom hujayralari hosil boʻlishi uchun sharoit yaratiladi. Mahalliy yalligʻlanishni kamaytiradi. Salitsil kislotasi antiseptik xususiyatga ega boʻlib, infeksiyani oldini oladi va teridagi yalligʻlanishni kamaytiradi. Jarayonning bosqichlari; Salitsil kislotasi mahsuloti (eritma, krem yoki plastir) soʻgal yuzasiga qoʻllanadi. Preparat bir necha kun davomida soʻgal yuzasidagi keratin qavatini yumshatadi va eritadi. Asta-sekin soʻgalning kattaligi kichrayadi yoki toʻliq yoʻqoladi. Soʻgal oʻrnida yangi, sogʻlom teri qatlami hosil boʻladi.

**Discussion and Results:** Medical Treatments Medical Procedures Cryotherapy: Freezing the wart using liquid nitrogen. Electrocoagulation: Burning the wart with electrical current. Laser Therapy: Removing the wart using a laser beam. Surgical Removal: Suitable for large or complex warts. Medications. Salicylic Acid: A topical treatment that softens and gradually eliminates warts. Immune-Boosting Medications: Help the body fight HPV more effectively. Home Remedies Use of special over-the-counter gels and medicated patches for wart removal. Maintain hygiene and avoid irritation of affected areas. Preventive Measures for Warts Maintain Hygiene: Wear shoes in public places. Avoid sharing personal items like towels or razors. Boost Immunity Eat a vitamin-rich diet, exercise, and ensure adequate rest. Vaccination: Protect against high-risk HPV strains. Cautions When Using Salicylic Acid Apply only to the wart, avoiding surrounding healthy skin. Seek medical advice for large or deep-rooted warts.

**Muhokamalar va natijalar:** Tibbiy muolajalar

Krijarrohlik: Soʻgalni suyuq azot bilan muzlatib olib tashlash.

Elektrokoagulyatsiya: Elektrotok yordamida soʻgalni kuydirish.

Lazer terapiyasi: Lazer yordamida soʻgalni yoʻq qilish.

Jarrohlik yoʻli bilan olib tashlash: Katta yoki murakkab holatlarda qoʻllanadi.

Dori-darmonlar Salitsil kislotasi: Mahalliy dori shaklida ishlatiladi, soʻgallarning yuzasini yumshatadi va asta-sekin yoʻq qiladi. Immunitetni kuchaytiruvchi preparatlar: Organizmni HPVʻga qarshi kurashishiga yordam beradi. Uy sharoitida yordam Soʻgallarni davolash uchun dorixonalarda maxsus gellar va plastirlar mavjud.

Gigienaga rioya qilish va tirnashni oldini olish muhim.

Soʻgallarning oldini olish choralari

1. Gigiena qoidalariga rioya qilish

Jamoat joylarida poyabzal kiyish.

Boshqalarning shaxsiy narsalarini ishlatmaslik.

2. Immunitetni kuchaytirish

Vitaminlarga boy ovqatlanish, sport bilan shug‘ullanish, yetarli dam olish.

3. HPVga qarshi emlash.

Oddiy usullardan biri teri shikastlanishidan saqlanish Salitsil kislotasi — keratolitik vosita bo‘lib, u terining yuqori qatlamini yumshatadi va so‘gallarni asta-sekin yo‘q qiladi. Ushbu jarayon quyidagicha amalga oshadi: Keratin qatlamini eritadi

**Conclusion.**Warts are typically harmless but can cause physical and aesthetic discomfort. They are primarily caused by HPV, and proper treatment combined with preventive measures can help in managing and avoiding warts.Prevention is Key: Avoid conditions that favor HPV infection.Prompt Treatment: Use salicylic acid for minor warts, and consult a dermatologist for recurrent or large growths.By addressing warts early and maintaining good hygiene, individuals can effectively minimize their impact and recurrence.

**Xulosa:** So‘gal – ko‘pincha zararsiz bo‘lsa-da, estetik va jismoniy noqulaylik keltiruvchi holatdir. Bazan insonga nuqsondek ta’sir etadi.U asosan HPV tufayli yuzaga keladi, ammo to‘g‘ri davolash va profilaktika choralariga rioya qilish orqali undan qutulish va oldini olish mumkin. Foydalanishda ehtiyot choralar:Atrofdagi sog‘lom teriga zarar yetkazmaslik uchun faqat so‘galning o‘ziga surish kerak.Juda katta yoki chuqur ildizli so‘gallarni davolash uchun shifokorga murojaat qilish tavsiya etiladi.Salitsil kislotasi oddiy so‘gallarni davolashda samarali va xavfsiz usul hisoblanadi, ammo bu jarayon bir necha hafta davom etishi mumkin.xulosa qilib shuni aytsak bo‘ladiki so ‘gallarni maydaligida Salitsil kislotasi bilan oldini olsak bo ‘ladi Agar so‘gallar tez-tez paydo bo‘lsa yoki hajmi oshib borsa, dermatolog bilan maslahatlashish tavsiya etiladi. Avvalo uni paydo bo‘lishiga yo‘l qo ‘ymasligimiz kerak. Bor bo’sa undan tezroq halos bo ‘lishimiz kerak.