

MEANINGFUL PARTNERSHIPS WITH CPC – PATIENT EDUCATION Part 4

In the June edition of our education series, we are discussing various **viral skin conditions**. These are common conditions caused by a variety of viruses that infect the skin and surrounding tissues. These infections can present with a wide range of symptoms, including rashes, blisters, warts, and lesions. Some of the most frequently encountered viral skin infections are caused by the human papillomavirus (HPV), herpes simplex virus (HSV), varicella-zoster virus (VZV), and molluscum contagiosum virus.

HPV: Human papillomavirus (HPV) is one of the most common causes of viral skin infections and is responsible for the development of various types of warts on the skin and mucous membranes. HPV infects the epithelial cells of the skin through small cuts or abrasions, leading to excessive cell growth and the formation of benign lesions such as common warts, plantar warts, and flat warts. The virus is transmitted primarily through direct skin-to-skin contact or contact with contaminated surfaces. Although many HPV infections resolve spontaneously as the immune system clears the virus, some infections can persist and recur. Certain HPV strains are also associated with an increased risk of cancers affecting the cervix, anus, and oropharynx, highlighting the importance of preventive measures such as vaccination and regular health screenings.



HSV: Herpes simplex virus (HSV) is a common viral pathogen that causes skin and mucosal infections characterized by painful, fluid-filled vesicles and ulcerative lesions. There are two primary types of HSV: HSV-1, which is most commonly associated with oral herpes and cold sores, and HSV-2, which is more frequently linked to genital herpes. The virus is transmitted through direct contact with infected skin, mucous membranes, or bodily fluids. Following primary infection, HSV establishes latency within sensory nerve ganglia (meaning it can “hide”), allowing the virus to reactivate periodically and cause recurrent outbreaks. Factors such as stress, illness, immunosuppression, and ultraviolet light exposure can trigger reactivation. Although HSV infections cannot be cured, antiviral medications can help reduce symptom severity, shorten outbreak duration, and decrease viral transmission.



VZV: Varicella-zoster virus (VZV) is a highly contagious herpesvirus that causes two distinct clinical conditions: chickenpox (varicella) during primary infection and shingles (herpes zoster) upon reactivation later in life. The virus initially infects the skin and mucous membranes, producing a characteristic itchy, vesicular rash that progresses through stages of papules, vesicles, and crusted lesions. After the primary infection resolves, VZV remains dormant within sensory nerve ganglia, where it can persist for decades. Reactivation of the virus, often associated with aging, stress, or immunosuppression, results in shingles, a painful, localized eruption of grouped vesicles distributed along a dermatome (areas of skin that have connections to specific spinal nerves). Complications of VZV infection may include secondary bacterial skin infections, postherpetic neuralgia (severe pain that lingers), and neurological involvement. Vaccination has significantly reduced the incidence and severity of both chickenpox and shingles, making it an important strategy for disease prevention.



Chicken Pox



Shingles

Molluscum contagiosum: Molluscum contagiosum is a common viral skin infection caused by the molluscum contagiosum virus, a member of the poxvirus family. The infection is characterized by the development of small, firm, flesh-colored or pearly papules with a distinctive central indentation, known as umbilication. Molluscum contagiosum is transmitted through direct skin-to-skin contact, contact with contaminated objects such as towels, or autoinoculation through scratching. The condition is most frequently observed in children but can also affect adults, particularly those who are immunocompromised.



Lesions commonly occur on the face, trunk, extremities, and genital region and are usually painless, although they may become inflamed or itchy. In most healthy individuals, molluscum contagiosum is self-limiting and resolves spontaneously within several months to a few years; however, treatment may be pursued to prevent spread, reduce cosmetic concerns, or manage persistent lesions.

Diagnosis and Treatment: Your dermatologist may take a biopsy to send to CPC for analysis. Under the microscope, our Pathologists can see specific changes in the dermis and the epidermis, which are caused by the various viruses.

Although many viral skin infections are self-limiting, some may require medical treatment to reduce symptoms, prevent complications, or limit transmission. Your dermatologist will use results received from CPC to tailor a plan to treat the condition(s).

Preventive measures such as good hygiene practices, avoiding contact with infected individuals, and vaccination against certain viruses can significantly reduce the incidence of viral skin infections and their associated health burdens.

CPC can help! By integrating our specialized testing expertise with your clinical care, CPC strives to provide tailored educational resources that help patients better understand their results and treatment plans.

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