Opinion Article

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Molluscum Contagiosum

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Abstract

Molluscum Contagiosum (MC) is a self-limiting infectious dermatosis that affects children, adults who are sexually active, and people who are immunocompromised. Molluscum Contagiosum Virus (MCV) is a Poxviridae virus that causes the disease. MCV is mostly transmitted by sexual, non-sexual, or autoinoculation contact with infected skin. In the clinic, MC appears as firm, spherical papules that are pink or skin-coloured and have a shiny, umbilicated surface. The duration of the lesions varies, although they usually resolve within 6-9 months. The skin lesions can vary in size, form, and location, which is more common in immunocompromised patients, and can lead to eczema or bacterial superinfection. Clinical findings are used to make the diagnosis. Dermoscopy is an important clinical tool. If the diagnosis is still in doubt, confocal microscopy or a skin biopsy may be necessary. The need for active treatment for MC is debatable; nonetheless, it is widely agreed that it should be considered in cases of advanced disease with complications or cosmetic concerns. Mechanical, pharmacological, immunomodulatory, and antiviral treatments are among the available options. The goal of this article is to go over the latest research on the origin, clinical symptoms, diagnosis, and treatment options for MC.

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Introduction

Molluscum Contagiosum (MC) is a self-limiting infectious dermatosis that affects children, sexually active adults, and people who are immunocompromised. It is spread mostly through direct contact with infected skin and is characterised clinically by umbilicated pink or skin-coloured papules. It is a common reason for paediatric dermatological consultations, and because it's self-limited, the decision to treat or not to treat it becomes complicated.

The Molluscum Contagiosum Virus (MCV), a double-strand DNA virus belonging to the Poxviridae family that only infects humans, causes MC. There are four genotypes of MCV: MCV 1, MCV 2, MCV 3, and MCV 4. MCV 1 is the most prevalent genotype (75%-96%), followed by MCV 2 and MCV 3, with MCV 3 and 4 being exceedingly rare. According to a study, MCV 1 infection is more common in children than in adults, and MCV 2 infection is more common in adult women than MCV 1. MCV infects the epidermis and replicates in the cytoplasm of cells during a two- to six-week incubation period. Various research have been performed to sequence the genome of this virus and identify probable genes involved in the virus's evasion of the host immune response, a theory that originated from the lack of inflammation detected in histopathological samples of infected skin. MC159, MC160, MC132, and MC005 are the four viral genes that code for proteins that affect the activation of the Nuclear Factor Kappa B (NF-kB). NF-kB is a nuclear protein complex found in dendritic cells that regulates DNA transcription and aids in the production of pro-inflammatory cytokines-Tumor Necrosis Factor (TNF), Interleukin (IL-1), and IL-6, among others, as well as the activation of both innate and acquired immune systems. The proteins MC132 and MC005 interfere with NF-kB activation by blocking Pattern Recognition Receptors (PRRs). MC132 would bind to the p65 subunit of NF-kB and accelerate its degradation, whereas MC005 would prevent the activation of the IKK complex (IkB kinase) attaching to active NEMO subunit (essential modulator of NF-kB). MCV is spread through sexual, non-sexual, or autoinoculation contact with infected skin. It can also be spread through contaminated fomites such as bath sponges or towels. The use of a swimming pool has been linked to it. MC is a disease that affects people all over the world. It is more common in children, but it can also affect adolescents and adults. It usually affects children between the ages of 2 and 5, with cases under the age of 1 year being extremely rare. There are no distinctions between men and women. There is a scarcity of information on the prevalence of MC. A meta-analysis of cross-sectional surveys among youngsters

found an overall prevalence of 8.28% (95% confidence interval 5.1-11.5), with a higher incidence in warm-climate areas. The frequency in children in the United States is estimated to be less than 5%. In terms of seroprevalence, the results vary depending on the population. MCV seropositivity was found to be 23% in children and adults in an Australian investigation utilising an Enzyme Linked Immunosorbent Test (ELISA). A seroprevalence of 14.8% in German children and adults aged 0 to 40, and 30.3% in a population of 30 healthy individuals aged 27 years in the United Kingdom; seroprevalence was established by ELISA of antibodies against the MC084 protein in both studies. ELISA of antibodies against an N-terminal truncation of the MC133 protein revealed a seroprevalence of 6% in a healthy Japanese population. MC can affect teenagers and adults as a sexually transmitted disease or as a result of contact sports. Immunocompromised patients are more likely to develop it: The number of documented cases of MC in the 1980s, ostensibly in response to the onset of the acquired Human Immunodeficiency Virus (HIV) epidemic. The prevalence of HIV is estimated to be around 20% in HIV patients.MC has been linked to iatrogenic immunosuppression and primary immunodeficiencies, in addition to HIV (e.g, DOCK8 immunodeficiency syndrome). It has been suggested that Atopic Dermatitis (AD) is a risk factor for MC. According to certain research; patients with AD had a higher risk of MC, with prevalence rates of AD as high as 62% among patients with MC. It's even been suggested that persons with Alzheimer's disease and the filaggrin mutation have a higher risk of MCV infection. There were no significant differences in other investigations.