Molluscum Contagiosum

Molluscum contagiosum is a common skin infection caused by a pox virus that affects children and adults. Transmission is usually by direct skin contact and has occurred in contact sports and by sharing baths, towels and gymnasium equipment. Outbreaks in schools are well recognised.

Pathophysiology

Molluscum contagiosum is a viral skin infection caused by molluscum contagiosum virus (MCV), a DNA pox virus, specifically a member of the Poxviridae family. There are four distinct subclasses of MCV, with MCV1 being the most common cause of molluscum contagiosum. MCV2 is relatively common in those individuals with HIV or immunosuppression.

Epidemiology

There are no precise figures but molluscum contagiosum is common. The exact prevalence is uncertain. Many people never seek medical care and it is not a notifiable disease. Studies done often look at selected populations (for example, attendees at genitourinary medicine (GUM) clinics or dermatology outpatient departments).

- Over 90% of those presenting in UK general practice are under the age of 15 years[1].
- Prevalence in people with HIV has been reported to be between 5% and 33%[2].
- A systematic literature review in 2014 concluded that[3]:
  - Evidence on epidemiology of molluscum contagiosum is generally of poor quality.
  - The greatest incidence is in children under the age of 14 years, and highest in the 1- to 4-year-old age group.
  - Incidence rate ranges from 12-14 episodes per 1,000 per year in children.
  - Point prevalence in children aged 0-16 years is 5.1-11.5%.

Risk factors[2, 3]

- It occurs most often in children.
- People who are immunocompromised, in particular from HIV, steroid treatment or lymphoproliferative disorders, are more at risk of molluscum contagiosum. However, the vast majority of infected people have a competent immune system.
- Molluscum contagiosum seems to occur more often in children with atopic eczema.
- There is an association with swimming.
- It is usually spread by direct contact but may be transmitted via contaminated objects such as towels, clothes or toys. In adults it is often spread by sexual contact.
- It is almost exclusively a disease of humans and so there is neither a risk of children infecting pets nor of pets infecting children.

History

The incubation period is usually between 2-8 weeks. It is assumed to be infectious as long as there are visible lesions present. Usually it is asymptomatic but there may be tenderness, pruritus and eczema around the lesions. They tend to spread more rapidly in atopic individuals or in skin conditions where the skin barrier is less effective. It is almost invariably confined to the skin but cases affecting the eyelids and conjunctiva have been reported. There is no pyrexia or malaise.

Mean duration of each lesion is around eight months; however, due to autoinoculation, new lesions occur[2].
Examination

- Firm, smooth, umbilicated papules, usually 2-5 mm in diameter. Lesions bigger than 15 mm have been described in people with AIDS.
- They may be the colour of skin, white, translucent or slightly yellow.
- In children they are usually on the trunk or extremities. In adults they are often on the lower abdomen, inner thighs or genital region, suggesting sexual transmission. The discovery of this distribution in children is not usually an indication of sexual abuse, as molluscum contagiosum in the genital area is common.
- Although rare, it has been reported on the buccal mucosa.
- They may be single or more typically in clusters of up to 30 lesions but sometimes there are many more. There may be 100 or more in immunocompromised individuals. In some conditions (for example, sarcoidosis, lymphocytic leukaemia, congenital immunodeficiency, selective immunoglobulin M deficiency, thymoma, prednisolone and methotrexate therapy, AIDS, malignancy, atopic dermatitis), multiple widespread, persistent and disfiguring lesions can occur (especially troublesome on the face but also involving the neck and trunk).

![Image of multiple red umbilicated papules]

Note the multiple, red, umbilicated papules as well as some smaller ones of a paler colour.

For more images, see the website of DermNet NZ.

Differential diagnosis

- Lichen planus.
- Dermatitis herpetiformis.
- Basal cell carcinoma.
- Keratoacanthoma.
- Fibrous papule of the face.
- Cutaneous cryptococcosis - also umbilicated papules, not uncommon on the face, found in conditions with immunosuppression (especially HIV).
- Milia.
- Spitz’ naevus.
- Syringomata.
- Dermatofibroma.
- Herpes virus infections.
- Warts.
Investigations

These are not usually required and diagnosis is made on clinical grounds based on the appearance of lesions. Dermatoscopy may be helpful if the diagnosis is unclear. Molecular methods such as PCR are available but are not generally used in clinical practice. If there are widespread lesions, consider investigation for immunosuppression. Referral to a GUM clinic may be indicated if it is thought that it may have been transmitted through sexual contact, for screening for other sexually transmitted infections.

Management

Parents often request treatment for their children and express concern about the infection spreading. However, all techniques are a little painful and there is little convincing evidence for the benefit of treatment, so usually the best management is to await spontaneous resolution. If lesions are very troublesome, consider advising squeezing or piercing after a bath, or cryotherapy. If there is evidence of secondary bacterial infection, a topical antibiotic cream may be required. An emollient or mild steroid cream (such as hydrocortisone 1%) may be helpful if there is surrounding eczema or inflammation.

General self-care advice

- Reassurance. Set realistic expectations. Most cases will clear up spontaneously within 18 months.
- Avoid scratching. This increases the chance of spread within the individual and to others, and increases the risk of infection and of scarring.
- Advise there is no need for exclusion from school, swimming or gym activities.
- Advise not to share towels. There is possibly some value in covering lesions for communal activities such as PE.
- In adults with anogenital lesions, advise the use of condoms.

Treatment options

A Cochrane review found that no single treatment was convincingly effective for molluscum contagiosum. Their report suggests that although many treatment strategies are used, there is not a solid evidence base yet for any of them.

- Cryotherapy with liquid nitrogen.
- Benzoyl peroxide cream. (There is limited evidence of efficacy in the Cochrane review.)
- Sodium nitrate co-applied with salicylic acid. (There is limited evidence of efficacy in the Cochrane review.)
- Potassium hydroxide 5% or 10% topical solutions. There is no statistical significance to benefit in the Cochrane review. These are available to prescribe as medical devices in the UK (meaning less stringent evaluation is required than for a licensed medicine) as MolluDab® and Molutrex® but, as evidence is so limited and they are available to buy over the counter, many areas advise against prescribing.
- Iodine preparations.
- Hydrogen peroxide 1% cream (available to prescribe as Crystacide® in the UK).
- Imiquimod 5% cream. (No convincing benefit was found in healthy individuals in the Cochrane review; however, this has been used in immunocompromised people.)
- Pulsed dye laser.

Referral

- This is rarely indicated.
- Refer to an ophthalmologist if the eyes are involved.
- Refer to a sexual health clinic to screen for other sexually transmitted disease if anogenital lesions are present in adults.
- Podophyllotoxin 0.5% may be used for treatment.
- Refer immunosuppressed individuals with extensive lesions.
Complications

- Discomfort and irritation.
- Inflammation.
- Secondary infections.
- Eyelid lesions may be associated with follicular or papillary conjunctivitis.

Prognosis

It is a benign, self-limiting infection with an excellent prognosis. The literature on molluscum contagiosum should be interpreted with care. Much research originates from secondary care on patients with impaired immunity.

Further reading & references


1. UK national guideline for the management of genital molluscum in adults 2014; British Association for Sexual Health and HIV (July 2014)
2. Molluscum contagiosum; NICE CKS, September 2012 (UK access only)
4. Molluscum contagiosum; Primary Care Dermatology Society
5. Molluscum contagiosum: images; DermNet NZ

Disclaimer: This article is for information only and should not be used for the diagnosis or treatment of medical conditions. Patient Platform Limited has used all reasonable care in compiling the information but makes no warranty as to its accuracy. Consult a doctor or other healthcare professional for diagnosis and treatment of medical conditions. For details see our conditions.