IJNRD.ORG ISSN : 2456-4184
INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG
An International Open Access, Peer-reviewed, Refereed Journal

ROLE OF HOMOEOPATHY IN MOLLUSCUM CONTAGIOSUM IN CHILDREN (3-12 years)

[1]**Dr. Vineeta Neeraj Kumar,** [2]**Dr.** Shailendra Pratap Rao, [3]Dr. Bhanupratap Singh, [4]Dr. Mantosh Yadav
[1]Assitant Professor, [2]Assitant Professor, [3]Associate Professor, [4]Associate Professor
[1]Surgery, [2]Forensic medicine and toxicology
[3]Homoeopathic Materia Medica, [4]Surgery
[1,2,3,4]Aarihant Homoeopathic Medical College & Research Institute, Gandhinagar, India.

ABSTRACT

Molluscum contagiosum is a common cutaneous viral infection in children. It is a benign but nonetheless frequently troublesome viral infection that generally affects young children. Many studies have shown that, it comprises nearly 1% of all the skin diseases and its incidence has increased nearly fourfold during past twenty years.
Homoeopathy has excellent scope in the treatment of molluscum contagiosum. The treatment is targeted towards the root of the illness and hence homoeopathy brings about lasting cure rather than temporary relief.

OBJECTIVES

To study safe and effective treatment of *Molluscum Contagiosum* without any side effects.

Keywords

Benign, Molluscum contagiosum,Homoeopathy,*silicea.*

INTRODUCTION

Skin is the largest organ of the body and it forms about sixteen percent of its total mass. It is connecting link between the internal organs and the outer world.
Molluscum contagiosum is one among them caused due to *molluscum contagiosum virus (MCV)*. It commonly affects the children. Many studies have shown that, it comprises nearly 1% of all the skin diseases and its incidence has increased nearly fourfold during past twenty years.
Molluscum contagiosum being a contagious disease, it poses embarrassment for school attending children. Cosmetic purpose is another important reason for which treatment is sort.
Though *Molluscum contagiosum* is self limiting disease, some patients may develop complications, such as secondary bacterial infection, chronic conjunctivitis and punctuate keratitis. Hence treatment is needed to prevent above said complications

Conventional mode of treatment is curettage or cryosurgery which has to be done repeatedly. Moreover the utility of curettage and cryosurgery is limited when the lesions are too small and too many. Formation of scar as a sequel of such treatment is high.
In this study, I have made a sincere attempt to understand the essential nature of *molluscum contagiosum*,

its different manifestation and homoeopathic approach, which is not been done systematically so far. Hence there is need to study in detail the effectiveness of homoeopathic treatment of *molluscum contagiosum* in pediatric age group.

SKIN

Skin and its accessory structures – hair and nails, along with various glands, muscles, and nerves – make up the ***integumentary system***. ***Dermatology*** is the medical specialty that deals with the diagnosis and treatment of integumentary system disorders.[50]

Skin covers the entire external surface of the body, including the external auditory meatus, the lateral aspect of the tympanic membrane and the vestibule of the nose. It is continuous with the mucosae of the alimentary, respiratory and urogenital tracts at their respective orifices, where the specialized skin of mucocutaneous junctions is present. It also fuses with the conjunctiva at the margins of the eyelids, and with the lining of the lachrymal canaliculi at the lachrymal puncta.[46] It is the largest organ of the body in both surface area and weight.[50]

FUNCTIONS OF SKIN

The integumentary system contributes to homeostasis by protecting the body and helping regulate body temperature. It also allows you to sense pleasurable, painful, and other stimuli in your external environment.

The integumentary system helps maintain a constant body temperature, protects the body, and provides sensory information about the surrounding environment. Of all the body‘s organs, none is more easily inspected or more exposed to infection, disease, and injury than the skin. Although its location makes it vulnerable to damage from trauma, sunlight, microbes, and pollutants in the environment, the skin‘s protective features ward off such damage. Because of its visibility, skin reflects our emotions (frowning, blushing) and some aspects of normal physiology (such as sweating). Changes in skin colour may also indicate homeostatic imbalances in the body. For example, the bluish skin colour associated with hypoxia (oxygen deficiency at the tissue level) is one sign of heart failure as well as other disorders. Abnormal skin eruptions or rashes such as chickenpox, cold sores, or measles may reveal systemic infections or diseases of internal organs, while other conditions, such as warts, age spots, or pimples, may involve the skin alone. So important is the skin to self-image that many people spend a great deal of time and money to restore it to a more normal or youthful appearance.

The numerous functions of the integumentary system (mainly the skin) include thermoregulation, storage of blood, protection, cutaneous sensations, excretion and absorption, and synthesis of vitamin D.

DIAGNOSIS OF SKIN DISORDERS

The key to successful treatment is an accurate diagnosis. Keen eyes and a magnifying glass are all that are needed for a complete examination of the skin. Sometimes it is best to examine the patient briefly before obtaining a full history: a quick look will often prompt the right questions. However, a careful history is important in every case, as is the intelligent use of the laboratory.

HISTORY

The key points to be covered in the history should include descriptions of the events surrounding the onset of the skin lesions, of the progression of individual lesions, and of the disease in general, including any responses to treatment. Many patients try a few salves before seeing a physician. Some try all the medications in their medicine cabinets, many of which can aggravate the problem. A careful inquiry into drugs taken for other conditions is often useful. Ask also about previous skin disorders, occupation, hobbies and disorders in the family.

EXAMINATION

To examine the skin properly, the lighting must be uniform and bright. Daylight is best. The patient should usually undress so that the whole skin can be examined, although sometimes this is neither desirable nor possible. The presence of a chaperone, ideally a nurse or a relative, is often sensible, and is essential if examination of the genitalia is necessary.

DISTRIBUTION AND MORPHOLOGY

A dermatological diagnosis is based both on the distribution of lesions and on their morphology and configuration. See if the skin disease is localized, universal or symmetrical. Note negative as well as positive findings. Always keep your eyes open for incidental skin cancers which the patient may have ignored.
After the distribution has been noted, next define the morphology of the primary lesions. Many skin diseases have a characteristic morphology, but scratching, ulceration and other events can change this. The rule is to find an early or _primary' lesion and to inspect it closely. What is its shape? What is its size? What is its colour? What are its margins like? What are the surface characteristics? What does it feel like? Most types of primary lesion have one name if small, and a different one if large.

There are many reasons why you should describe skin diseases properly.

Skin disorders are often grouped by their morphology. Once the morphology is clear, a differential diagnosis comes easily to mind.

If you have to describe a condition accurately, you will have to look at it carefully.

You can paint a verbal picture if you have to refer the patient for another opinion.[26]

TERMINOLOGY OF LESIONS

Primary lesions
Primary lesions of the skin can be categorised under following types,
Flat lesions

- *Macule*: a small (<1cm), circumscribed area of colour change without elevation or depression of the skin.
- *Patch*: a larger (>1cm) area of colour change without skin elevation or depression.
- Elevated lesions

- Solid lesions
    - *Papules* (<0.5 cm in diameter).
    - *Nodules* (>0.5 cm in diameter).
    - *Wheals*: pink, rounded, or flat-topped elevations due to edema in the skin.
    - *Plaques*: plateau-shaped structures often formed by the coalescence of papules.
- Fluid-filled lesions
    - *Vesicles*: <0.5 cm in diameter and filled with serous or clear fluid.
    - *Bullae*: 0.5 cm in diameter and typically filled with serous or clear fluid.
    - *Pustules*: <0.5 cm in diameter and filled with purulent material.[26,32]
    - *Abscess*: Localized collection of pus in a cavity, more than 1 cm in diameter. Abscesses are usually nodules, and the term _purulent bulla' is sometimes used to describe a pus-filled blister that is situated on top of the skin rather than within it.[26]
    - *Cysts*: 0.5 cm in diameter; represent sacs containing fluid or semisolid material (Unlike in bullae, the material within a cyst is not visible from the surface).

- Depressed lesions
    - *Erosions*: superficial loss of epidermis with a moist base.
    - *Ulcers*: deeper lesions extending into the dermis or below.

Other lesions

- *Erythema* is redness caused by vascular dilatation.
- *Angioedema* is a diffuse swelling caused by oedema extending to the subcutaneous tissue.
- *Tumour* is harder to define as the term is based more correctly on microscopic pathology than on clinical morphology. We keep it here as a convenient term to describe an enlargement of the tissues by normal or pathological material or cells that form a mass, usually more than 1 cm in diameter. Because the word _tumour' can scare patients, tumours may courteously be called _large nodules', especially if they are not malignant.
- *Papilloma* is a nipple-like projection from the skin.
- *Petechiae* are pinhead-sized macules of blood in the skin.
- The term *purpura* describes a larger macule or papule of blood in the skin. Such blood filled lesions do not blanch if a glass lens is pushed against them (diascopy).
- *Ecchymosis* is a larger extravasation of blood into the skin.
- *Haematoma* is a swelling from gross bleeding.
- *Burrow* is a linear or curvilinear papule, with some scaling, caused by a scabies mite.
- *Comedo* is a plug of greasy keratin wedged in a dilated pilosebaceous orifice.

  Open comedones are blackheads. The follicle opening of a closed comedo is nearly covered over by skin so that it looks like a pinhead-sized, ivory-coloured papule.
- *Telangiectasia* is the visible dilatation of small cutaneous blood vessels.
- *Poikiloderma* is a combination of atrophy, reticulate hyperpigmentation and telangiectasia.

Secondary lesions

These evolve from primary lesions.

- *Scale* is a flake arising from the horny layer.
- *Keratosis* is a horn-like thickening of the stratum corneum.[26]
- *Crust* may look like a scale, but is composed of dried blood or tissue fluid.[26, 32]
- *Ulcer* is an area of skin from which the whole of the epidermis and at least the upper part of the dermis has been lost. Ulcers may extend into subcutaneous fat, and heal with scarring.
- *Erosion* is an area of skin denuded by a complete or partial loss of only the epidermis. Erosions heal without scarring.
- *Excoriation* is an ulcer or erosion produced by scratching.
- *Fissure* is a slit in the skin.

Sinus is a cavity or channel that permits the escape of pus or fluid.

- *Scar* is a result of healing, where normal structures are permanently replaced by fibrous tissue.
- *Atrophy* is a thinning of skin caused by diminution of the epidermis, dermis or subcutaneous fat. When the epidermis is atrophic it may crinkle like cigarette paper, appear thin and

translucent, and lose normal surface markings. Blood vessels may be easy to see in both epidermal and dermal atrophy.[26]

- *Lichenification* is an area of thickened skin with increased markings.[27,32]
- *Stria* (stretch mark) is a streak-like linear atrophic pink, purple or white lesion of the skin caused by changes in the connective tissue.
- *Pigmentation*, either more or less than surrounding skin, can develop after lesions heal.

Having identified the lesions as primary or secondary, adjectives can be used to describe them in terms of their other features.

- Colour (e.g. salmon-pink, lilac, violet).
- Sharpness of edge (e.g. well-defined, ill-defined).
- Surface contour (e.g. dome-shaped, umbilicated, spire-like).
- Geometric shape (e.g. nummular, oval, irregular, like the coast of Maine).
- Texture (e.g. rough, silky, smooth, hard).
- Smell (e.g. foul-smelling).
- Temperature (e.g. hot, warm).

Dermatologists also use a few special adjectives which warrant definition.

- *Nummular* means round or coin-like.
- *Annular* means ring-like.
- *Circinate* means circular.
- *Arcuate* means curved.
- *Discoid* means disc-like.
- *Gyrate* means wave-like.
- *Retiform* and *reticulate* mean net-like.

Configuration

After unravelling the primary and secondary lesions, look for arrangements and Configurations that can be, for example, discrete, confluent, grouped, annular, arcuate or dermatomal. Note that while individual lesions may be annular, several individual lesions may arrange themselves into an annular configuration. Terms like annular, and other adjectives discussed under the morphology of individual lesions, can apply to their groupings too. The Koebner or isomorphic phenomenon is the induction of skin lesions by, and at the site of, trauma such as scratch marks or operative incisions.

Special tools and techniques

A special diagnostic tools and techniques can be used to diagnosis the skin conditions, such as *magnifying lens, wood's light, diascopy, photography and dermatoscope.*[26]

MOLLUSCUM CONTAGIOSUM

DEFINITION

Molluscum contagiosum is a common cutaneous viral infection in children. It is caused by infection with a DNA virus of the *Molluscipoxvirus* genus.[27,43,48]

The word Molluscum contagiosum comes from the Latin word named *MOLLUSCUS* means SOFT characterised by pea sized semiglobular pearl like lesion with minute central depression.[1]

It is a benign but nonetheless frequently troublesome viral infection that generally affects young children.[57]

SYNONYMS

Molluscum sebaceum; Molluscum epitheliale;[1,11] *Epithelioma contagiosum;* [1,11,15]

Epithelioma molluscum; [1,11] *Dimple wart.*[15]

HISTORY

Molluscum contagiosum is a cosmopolitan human disease; several reviews describe the disease and the virus.[16] Its characteristic appearance was first described in 1817 by Bateman, who labelled disorder ―molluscum‖, a common term then for pedunculated lesions, and described it as ―contagiosum‖ to signify its apparent transmissibility, which he felt was due to the ―milky fluid‖ which could be expressed from the lesions. He differentiated the infection from molluscum fibrosum (neurofibromatosis). In 1841, Henderson and Paterson each described in this fluid cellular elements with large intracytoplasmic inclusion bodies (subsequently termed Henderson-Paterson, or molluscum bodies), which they felt were responsible for causation and transmission of the diseases. Subsequent reports of transmission of infections to humans by direct inoculation of lesion material supported an infectious etiology. The findings of tiny ―elementary bodies‖ within the molluscum bodies by Lipschutz in 1911, and of disease transmission by a ―filterable agent‖ by Juliusberg in 1905 and Wile and Kingery in 1919, suggested viral agent.[16,24] In 1933 Goodpasture and Woodruff described the inclusions and elementary bodies of molluscum contagiosum compared with those of fowl pox and concluded that the etiologic agent was a poxvirus. Since 1980, this relatively inconsequential illness at times has occurred in patients with AIDS as a tormenting opportunistic infection, which in Western countries amounts to a 5% to 20% incidence among homosexual men with AIDS.[16]

AETIOLOGY

Molluscum contagiosum is caused by a large brick-shaped DNA poxvirus with an ultra structural resemblance to vaccinia virus.[56] It has features intermediate between the orthopox and parapox groups. It infects humans, causing characteristic skin papules. It cannot be grown in tissue culture or eggs, and, although not readily transmissible to laboratory animals, has been shown to produce typical changes on human skin cultured on immunoincompetent mice. Restriction endonuclease and PCR analyses of MCV DNA have identified two main types, MCV-1 and MCV-2, with two much rarer types, MCV-3 and MCV-4.[9,48] MCV-1 is more prevalent than MCV-2.[48]

Molluscum contagiosum is caused due to Exciting cause and categorized under individual acute disease. In this molluscum contagiosum virus acts as an exciting cause.

Large numbers of MCV particles can be extruded from skin lesions, and large amounts of viral DNA can readily be extracted from virions. MCV has not been grown in established cell cultures, but virus from skin lesions has been propagated in human foreskin xenografts. The recognition of MCV transcriptional control elements in genetically engineered vaccinia virus indicates that MCV has a replication strategy similar to

other poxviruses.
The MCV genome is a covalently closed, linear, double-stranded DNA of 190 kbp and 63% G+C. Restriction enzyme cleavage analysis of the DNAs of several hundred isolates from different parts of the world initially suggested two genome subtypes, subsequently a third, and recently a fourth, although the different DNAs cross-hybridize extensively by Southern blotting. The significance between restriction map differences and viral biologic differences is unknown; all DNA subtypes produce the same apparent disease.
Genomic DNA of MCV subtype I has been sequenced (GenBank No. U60315; 190,289 bp). Of 182 potential encoded proteins, 105 have homologs in variola virus DNA that are likely to be essential for virus replication based on correlation with known function orthopoxvirus proteins; however, MCV generally lacks corresponding sequences for proteins involved in immune surveillance and modulation. Of the 77 predicted MCV proteins without correlates in orthopoxviruses, 36 show potential to be host-interactive homologs. In vitro studies indicate these are isologs of cellular glutathione peroxidase,class I MHC protein, two apoptosis inhibitors, two polypeptides that bind IL-18, and a chemokine antagonist.[16]

EPIDEMIOLOGY

Molluscum contagiosum virus infection occurs worldwide and appear specific to humans.[57] Virus occurs throughout the world, most commonly causing disease in childhood. Type 1 MCV is found in the majority of infections (76–97%), and whilst there is no relationship between virus type and lesional morphology or anatomical distribution. The disease is common, but its incidence in most areas is not reliably known.[9]
It commonly affects children and sexually active adults as well as immunocompromised individuals.[51]
The disease is endemic with a higher incidence within institutions and communities where there is overcrowding, poor hygiene, and poverty.[22]
The incidence of disease is 2% to 8% in some populations and is more common among 10- to 12-year-old children in developed countries than in developing countries, such as Fiji and the DRC, where the peak incidence is reported between ages 2 and 3 years and 1 and 4 years, respectively. In New Guinea, a prevalence of 22% with an incidence of 6% in children younger than 10 years of age has been reported. The disease occurs sporadically, although it can become endemic, particularly in institutions such as children's day care or boarding schools, or in communities with poor hygiene and overcrowding. Contact transmission has occurred nosocomially, by tattooing, wrestling, or by swim team members sharing towels. Abundant lesions are common in atopic individuals who may acquire a patchy and irritable eczema around sites of infection known as eczema molluscatum. Genital molluscum sometimes coincides with other sexually acquired diseases, including AIDS, and may signal sexual abuse of a child; otherwise, children may acquire lesions on the arms, or most often, the upper torso.
The different DNA subtypes do not affect different body locations, as occurs in infections with human herpesviruses type 1 and 2. In one study of 261 patients, MCV subtypes I, II, and III were detected in a ratio of 226:32:3 (183). Usually, specimens from different parts of the body are the same DNA subtype as are isolates among contacts; however, on rare occasions, mixed infections have occurred. Genital MCV infection has recently become much more common based on studies in the United States and Great Britain.[16]

AGE

Molluscum contagiosum is more common in infants and children younger than 5 years of age.[32,42] Age of peak incidence is reported as between 2 and 5 years. The disease is rare under the age of 1 year, perhaps due to maternally transmitted immunity and a long incubation period.[9]

SEX

Molluscum contagiosum is more common in boys than in girls.[42]

PREDISPOSING FACTORS

1. Impaired cellular immunity.
2. HIV infected patients.[9,48]
3. Atopic dermatitis.[48,57]
4. Topical steroids and other topical immunomodulatory drugs.[9,51]

MODE OF INFECTION

1. By direct skin or mucous membrane contact.[9,16,20,57]
2. Bath towels, swimming pools, and turkish baths.
3. Individuals involved in close contact sports (e.g., wrestling).
4. Koebnerization.[57]
5. Indirectly by means of fomites by virus entry through breaks in the epidermis or in the infundibular portion of the hair follicle. [16,43,48]
6. Autoinoculation.[20,48,57]
7. Contact transmission has occurred nosocomially, by tattooing, wrestling, or by swim team members sharing towels.[2,16]
8. In hot countries where children are lightly dressed and in close contact with one another, spread within households is not uncommon.
9. Infection of children through sexual abuse is presumably possible. However, to a greater extent than warts, molluscum contagiosum is seen quite commonly on the genital, perineal and surrounding skin of children, and abuse should not be regarded as likely unless there are other suspicious features.[9]
10. Epidemiological studies suggest that transmission may be related to poor hygiene and climatic factors, such as warmth and humidity.[1]
11. Contact with contaminated objects, such as clothing or toys, etc.[22]

PATHOGENESIS AND PATHOLOGY

The typical molluscum contagiosum lesion consists of a localized mass of hypertrophied and hyperplastic epidermis extending down into the underlying dermis, without breaking the basement membrane and projecting above the adjacent skin as a visible tumour. There are increased mitotic figures in the germinal layer, above which are pathologic changes in the nuclei and cytoplasm. As the surface cells are approached, these lesions become more and more pronounced.[16]

Molluscum contagiosum virus (MCV) enters the basal keratinocyte and increases the rate of cell division to twice that of normal skin, probably by inhibition of normal keratinocyte apoptotic differentiation programmed by specific MCV encoded proteins. In prickle cell layer, mitosis declines as viral DNA synthesis increases. The cellular proliferation produces lobulated epidermal growths that compress the papillae until they appear as fibrous septa between the lobules. The basal layer remains intact. Each cell enlarges in size and the cytoplasm is filled with a large hyaline acidophilic granular mass known as molluscum bodies, which pushes the nucleus to the edge of the cell. These bodies are present in large number in the cavity which appear near the surface of the centre of a fully developed lesion.[15,24] Inflammatory changes in the dermis are absent or slight. But in lesions of long duration, there may be a chronic granulomatous infiltrate.[9,51]

Studies of Cellular kinetics demonstrated three distinct stages of evolution in growth; an early stage, in which epithelium nuclei divide, a middle stage, in which epithelium division diminishes, and a late

stage, in which dermal endothelial cells and fibroblasts becomes activated. Inflammatory cells may be present in all three stages.[42]

The core of the lesion consists of degenerating epidermal cells, with inclusion bodies, and keratin, which is produced by uninfected cells. Fully developed lesions are loculated, and there is little inflammatory reaction in the corium unless secondary bacterial infection has occurred. The tumour-like appearance of lesions is from hypertrophy of epidermal keratinocytes because of the presence of virus-packed inclusion bodies and hyperplasia of uninfected basal cells.

Lesions are relatively devoid of cells involved in the immune response, including NK and Langerhans cells, although T cells may be present in the perilesional dermis. Infected keratinocytes no longer display b2-microglobulin, possibly because of complexing in the endoplasmic reticulum between an MCV homolog of MHC glycoprotein and cellular b2-microglobulin. MCV does not appear to encode an epidermal growth factor homolog; however, intense staining of transferrin and EGF receptor has been observed on molluscum bodies, but not on surrounding uninfected keratinocytes. MCV appears to provoke little immunity; patients under immunosuppressive therapy, and some AIDS patients, may have widespread and recurrent lesions. The lesions are noteworthy for the absence of reactive cells, and virus- specific antibodies are demonstrable in about 70% of patients; many patients develop antibodies after treatment for MCV (e.g., curettage). Antibodies against MCV do not react with different poxvirus genera. Lesions may persist in some patients for as little as weeks or as long as 2 years, with no sign of inflammation, which may be an effect of an MCV chemokine antagonist. Repeated attacks are relatively common in situations in which opportunities exist for reinfection, such as in children's day care centres and among sexually promiscuous adults.[16]

Specific antibodies have been found in about 58–73% of patients with molluscum contagiosum, and, perhaps due to unrecognized infection, in about 6–16% of controls, but these have not been demonstrated to have a role in disease clearance.[9]

HISTOLOGY

Molluscum lesions are acanthomas consisting of hyperplastic and hypertrophied epidermal cells which proliferate in a downward fashion into the dermis. Cells are filled with intracytoplasmic inclusion bodies, so called Henderson-Paterson bodies, which are eosinophilic ovoid structures in the lower malphighian layer. In the upper epidermis, they become more basophilic and may be as large as 35 µm in diameter.[42]

- *Circumscribed multilobular epithelial proliferation* with central keratinisation.
- *Intracytoplasmic* inclusions, at the periphery eosinophilic and towards the centre of the tumor more basophilic.
- Associated mixed or lymphocytic infiltrate.
- Occasionally lymphocytes are activated and enlarged.
- **Variant:** Molluscum contagiosum *folliculitis*: Involvement of follicular epithelia with inclusion bodies and associated mixed infiltrate.
- The histological changes are pathognomonic. When the inflammation is intense or in folliculitis, the inclusion bodies may initially be masked and the infiltrate mistaken for a lymphoma until deeper sections unearth the classic changes.[31]

CLINICAL FEATURES

1. The typical lesion of molluscum contagiosum are discrete, dome shaped, umbilicated waxy papules. [1,9,22,32,42]
2. They may be skin coloured, [2,9,22,42] pink or white. [1,9,20,32,42]
3. A small central punctum frequently is visible.[32,42]

4. If lesions are squeezed between the fingers, a cheesy or sebaceous-looking matter issues from the hilum.[1,13]
5. A lesion starts as a tiny papule and progresses to a size of 5–10mm in 6-12 weeks
6. Small lesions may join to form a plaque (_agminate form‘).[9,51]
7. Lesion may appear vesicular because of a translucent quality.
8. The size may vary from 1 to 5mm, few lesions can occur as large as 10 to 15 mm called as giant molluscum or molluscum contagiosum giganteum.[15,22,42]
9. Usually multiple. May be present in groups or may be widely disseminated on the skin and mucosal surfaces.[1]
10. They are rarely pedunculated (molluscum contagiosum pediculatum).[15]
11. Usually there is no itching or tenderness and no generalized symptoms.[22]
12. Lesions can occur anywhere on the body, but mostly on face, eyelids, neck, chest, axillae, sides of trunk, fold areas of extremities, and genitalia in children.[13,27,32] Palms and soles are rarely involved.[9,22,27]
13. After trauma, or spontaneously after several months, inflammatory changes result in suppuration, crusting and eventual destruction of the lesion.[9,20]
14. The disease usually lasts for 6 to 9 months,[9,14,41] but occasionally persisting for as long as 4 years.[9,14] Although individual lesions persist for only about 2 months.[9,41]
15. Lesions usually resolute spontaneously by forming erythema, pus and crusting.
16. Depressed scars or anetoderma-like lesions can remain when mollusca clear.[9]
17. Eczematous dermatitis occurs around the molluscum in 10% of cases known as molluscum dermatitis. [9,27,32]
18. In patient with chronic eczema or even atopic eczema, especially in areas of skin treated with glucocorticoids (local immune deficiency), hundreds of these mollusca contagiosa may develop: eczema molluscum.[15]
19. Multiple and widespread lesions are reported in atopic individuals and in immunosuppressed.[27,32]
20. Lesions on eyelids may produce conjunctivitis and/or keratitis.[9,27]
21. Usually not associated with sexual abuse or immunodeficiency in infants and children.
22. May occur as a sexually transmitted disease in sexually active adolescents and young adults.
23. Linear arrangement of lesions may be present, due to autoinoculation (Koebner phenomenon).[1,32]

DIAGNOSIS

1. The diagnosis of molluscum contagiosum is usually established on the basis of clinical appearance alone.[16,29,32]
2. Smears, made from the cheesy material expressed from the lesion is crushed between two slides and stained with Giemsa and Wright‘s stain show homogenous pear-shaped molluscum bodies. [2,16,27,32]
3. Skin biopsy reveals Henderson-Paterson bodies, which occasionally is used for large or atypical lesions.[27,32]
4. The distinctive umbilication can be seen more easily with a dermatoscope or after freezing.[9]
5. Demonstrating poxvirions by electron microscopy.
6. Diagnostic PCR methods are reported.
7. Occasionally, solitary lesions on the face or neck may be misdiagnosed clinically as basal cell

carcinoma.

8. Solitary tumours on the sole of the foot, although rare, also pose a clinical diagnostic problem.[16]

DIFFERENTIAL DIAGNOSIS

1. Varicella or Chickenpox. [24,29,42,57]
2. Verrucae or Plain warts.[15,24,32,51]
3. Juvenile xanthogranuloma.
4. Folliculitis.
5. Furunculosis.[42]
6. Lichen planus.[24,51]
7. Milia.[15,24,32]
8. Closed comedones.
9. Cryptococcosis.[24,32]
10. Syringomas.
11. Epithelial and intradermal nevi.
12. Sebaceous adenomas.
13. Histiocytomas.
14. Seborrheic and atopic dermatitis.
15. Basal cell epitheliomas.[24]
16. Genital herpes.[40]

COMPLICATIONS

1. Pruritus is sometimes a significant problem, particularly in those patients with underlying atopic dermatitis.
2. Chronic conjunctivitis and punctuate keratitis may develop in patient with eyelid lesions.
3. Secondary bacterial infection can occur, particularly if patients scratch their lesions.[57]
4. Eczematous patches often appear around mollusca.
5. Traumatized or over-treated lesions may become secondarily infected.[26]
6. Inflammation of molluscum contagiosum lesions is sometimes seen.[8]
7. Many a times though the skin has been cleared of the molluscum lesions, the core of the molluscum is not completely scraped off which can cause recurrence of this infection repeatedly.
8. Sometimes the cheesy matter in the centre of molluscum lesion gets infected with fungus, which spreads to all adjacent areas giving rise to white patchy discoloration and itching.

9. Recurrent molluscum can give rise to scarring, disfigurement and consequently mental trauma (Depression, low confidence in some cases).[40]

GENERAL MANAGEMENT

1. Avoid going to swimming pools, communal baths. [57]

2. Patients with Molluscum contagiosum should avoid sharing of personal items (eg, razors, bath towels) and contact with other fomites.[1,57]
3. Patients with Molluscum contagiosum should avoid scratching to prevent autoinoculation.
4. Obstetricians should be aware of the risk of vertical transmission of Molluscum contagiosum, and they should take precautions to prevent transmission during vaginal delivery.[1]

PREVENTION

- Prevention of spread may be enhanced by avoiding trauma to the site of involvement as well as avoiding scratching.
- Auto-inoculation may be decreased by treating existing lesions.[57]
- Chlorination of swimming pools.[5]
- One must refrain from squeezing or disturbing the lesion to prevent its spread.
- School children should not come in direct contact with infected child.
- Public toilets, swimming pools should be hygienically maintained.
- One must not share personal items of use such as towels, shaving blades, clothes, etc.
- Recurrent infections or skin lesions like eczema should be properly treated.[40]

TREATMENT

HOMOEOPATHIC CONCEPT OF TREATMENT

Homoeopathy has excellent scope in the treatment of molluscum contagiosum.[35,40] The treatment is targeted towards the root of the illness and hence homoeopathy brings about lasting cure rather than temporary relief.

Homoeopathic treatment not only helps in getting rid of the existing molluscum contagiosum but it also helps in removing the tendency for this condition to recur. Also the method of healing of the molluscum is without the use of any surgical aids and hence it helps in preventing scarring and other such side-effects that can occur due to surgery.[40]

Molluscum is predominantly *Sycotic* disease. So it requires an Anti-sycotic medicine to cure the case.[1,6]

In most cases the lesion disappears even without any treatment in a couple of months. However some lesions may persist for some time and require intervention. The drugs found useful in molluscum contagiosum include *Brom, Calc-ar, Calc, Kali-i, Sulph, Sil,* and *Thuj*. [1,20] *Calc* and ***Sil*** have been found very useful. After the correct dose of medicine, the lesions start disappearing after an inflammatory reaction with erythema and itching.[20]

Silicea as an internal remedy ranks first, and *Teucrium* next. *Bryonia, Bromine, Calc. Ars., Lycopodium, Nat. Mur.* and *Potass. iod.* complete the list.[13] Other remedies like *Sulphur, Thuja, Arsenicum, Iodum* are also beneficial.[17]

The question of ‗to treat or not to treat' becomes more complicated in patients with atopic dermatitis, who are at greater risk for secondary infection of the lesions. It is also challenging to treat the condition during swimming season because the lesions are known to spread in water.[30]

In §72 He says The diseases to which man is liable are either rapid morbid processes of the abnormally deranged vital force, which have a tendency of finish their course more or less quickly, but always in a moderate time-these are termed acute diseases; or they are diseases of such a character that, with small, often imperceptible beginnings, dynamically derange the living organism, each in its own peculiar manner , and cause it gradually to deviate from the healthy condition, in such a way that the automatic life energy, called vital force, whose office is to preserve the health, only opposes to them at the commencement and during their progress imperfect, unsuitable, useless resistance, but is unable of itself to extinguish them, but must helplessly suffer (them to spread and) it self to be ever more and more abnormally deranged, until at length the organism is destroyed; these are termed chronic disease. They are caused by infection with a chronic miasm.

J.H.Allen:

New growths are in themselves a life study; when I speak of new growths, I mean all of a benign or malignant origin; all are due to miasmatic origin and to miasmatic influence upon the life force. When we speak of new growths, we mean of course, false growth, abnormal growths, or falsifications in parts and organs of the body.

H.A.Roberts

In the secondary period of sycosis al most every disease that may arise takes on the inflammatory nature in some form; it may be acute, subacute or chronic. Sycotic manifestations are characterised by slowness of recoverySycosis never gives a true ulcer; the sycotic manifestations are more overgrowth of tissue than destructive of tissue. There are many warts and warty growths; these are sycotic signposts. The sycotic skin manifestations tend toward overgrowth or extra deposits pg230 232

Dr. Harimohan Choudhry:

Psora Vesicles of the itch- voluptuous, tickling, itching. Sycotic Wart and warty growths, sycotic manifestations are charecterised by slowness of recovery

Dr. Subrata Kumar Banerjea.

Vesicular eruptions are generally sycotic 122
Molluscum contagiosum(syco-psoric)123, 167
Vesicular eruptions which do not heal quickly are sycotic124
Sycosis has vesicular eruptions 153

Phyllis speight

Psora Vesicle of the itch-volumptous tickling and itching
Sycosis warty eruptions or growths.

MOLLUSCUM CONTAGIOSUM IN HOMOEOPATHIC LITERATURE

Clarke:

Clarke's Dictionary Of Practical Materia Medica.
A Dictionary of Practical Materia Medica
by John Henry Clarke M.D.
Molluscum contagiosum is seen in the clinical section of calcarea carb, silicea and sulphur.

Robin Murphy ND

Lotus Materia Medica. By Robin Murphy ND
Molluscum contagiosum is seen in the clinical section of, silicea and sulphur.

Rajan Sankran
Spirit of Homoeopathy
By Rajan Sankran
Interview with Dr. R. Sankaran by S.M. Gunavante Published in "The Homoeopathic Heritage", June 1990
Dr. Sarabhai Kapadia had a case of molluscum contagiosum. He took a full history, but could not get any characteristic symptoms. After an hour of taking the case, he saw the child scratching the head. The mother said that whenever the boy is sleepy, he does this. On the basis of Kent's Repertory: "Head: itching of scalp, sleep, when going to",
In section concomitants
Concomitants need not always be general symptoms. Sometimes, they are particular in a part of the body but have no pathological basis for their existence. My teacher successfully prescribed Agnus castus in the case of a child with molluscum contagiosum using the symptom "Itching of scalp when going to sleep". Dr. Sarabhai prescribed Agnus castus (perhaps 1M) and the molluscum disappeared soon, though the remedy does not cover the complaint.

HOMOEOPATHIC THERAPEUTICS

Some homeopathic medicines found to be efficacious in cases of Molluscum contagiosum are,

Belladonna

Fine complexion and delicate skin; dryness; bright redness; burning heat; throbbing pains; pains appear and disappear suddenly; wildly delirious, restless, sensitive, nervous; child jovial and entertaining when well but violent when sick.

- Red, inflamed molluscum.
- Burning of the skin, also felt by the hand and it continues to burn after touching the skin, as though a hot stove has been touched, very characteristic.
- Red, hot and shining redness of the skin, with dryness, and swelling of the parts.

Bromium

Hot patient; fatty, fair; great weakness and easily overheated then sweat profusely sensitive to drafts; glandular affinity; tremulous; better by eating; quarrelsome and/or friendly, cheerful and fairly happy.

- Molluscum commonly appear on face, arms and shoulders.
- Sensation of something being alive in the skin.
- Worse warmth or warm, damp weather.

Calcarea arsenicum

Chilly patient; anemic; tendency for epilepsy and nephritic conditions; infantile hepato-splenomegaly; restless, anxious and emotional child; dreads to be alone.

- Pearly eruptions.vesicular, small and shiny inappearance.[51]

Calcarea carbonica

Calcarea carbonica is an effective medicine for treating the molluscum contagiosum.[35]
These children are typically soft, over-fat, fair, chilly, and lethargic.[12] Children with red face, flabby muscles, who sweat easily and take cold readily in consequence. Large heads and abdomens; fontanelles and sutures open; bones soft, develop very slowly. Curvature of bones, especially spine and long bones; extremities crooked, deformed; bone irregularly developed. Head sweats profusely while sleeping, wetting pillow far around. Profuse perspiration, mostly on back of head and neck, or chest and upper part of body. Difficult and delayed dentition with characteristic head sweats, and open fontanelles. During either sickness or convalescence, great longing for eggs; craves indigestible things; aversion to meat.[3]
Obstinacy; slight mental effort produces hot head. Averse to work or exertion.

Apprehensive; Forgetful, confused, low-spirited. Warts on face and hands.[7]

Carcinosinum

Carcinosinum is indicated if the mental and emotional symptoms indicate it. Nevertheless, some physical signs are often seen in this remedy: the Molluscum contagiosum.[37,45]

Causticum

These are people who live with the feeling that they have a Damoclean sword hanging above their head. There has been a dramatic incident in their lives. For example, after a very difficult labor and birth, the infant is fearful, whimpering, and cries when others cry (out of compassion, since misfortune has befallen them). Indeed, these children live in constant fear that new worries will materialize. They cannot go to bed alone at night, they fear the dark, and are often afraid of dogs. We often observe weakness of some kind. These children also are late in learning to walk.
We may see paralysis following an injury at birth, or after convulsions or exposure to cold (for example, facial paralysis from cold). These children are sensitive to dry cold. A dry wind from the north always makes them hoarse, as does air conditioning: the throat burns with pain, and they prefer to drink ice-cold water.
Frequently, warts will be present, often small, widely scattered warts of the molluscum contagiosum type, or larger warts near the edge of the fingernails. These children may stutter or pronounce words poorly, which often earns them some visits to the speech therapist. At times dictatorial, they can play on their weakness in order to maintain those around them under their domination. Finally, we may observe enuresis (involuntary urination). The child is inclined to wet the bed during the first hours of sleep at night, and may also urinate involuntarily at times when coughing or running.[19]

Dulcamara

Chilly patient, with skin affections brought on or worse by exposure to cold, damp, rainy weather; restless and irritable.

- Ailments after taking bath in swimming pool.
- Humid eruptions on face, genitals, hands etc.
- Flat, pearly eruptions.
- Worse cold in general, damp, rainy weather.[51]

Juglans cinerea

Dr. Paine (eclectic) says: "The Juglandin, as I have previously remarked, acts as a direct stimulant and tonic to the cutaneous surface; hence, I have used it in chronic eczema, herpes, pemphigus, rupia, acne, impetigo, ecthyma, lichen, prurigo, icthyosis, molluscum, and all other forms of cutaneous diseases, and have found it to act with more certainly in these affections than any other preparation or single drug that I have used.[21]

Medorrhinum

Here is a key constitutional remedy for the "sycotic" terrain denoted by Hahnemann. These individuals have a problem with time. They are constantly projecting into the future. "What comes next?" This question, which is constantly on their lips, ruins the present for them.
In the family history there are cases of cancer and chronic rheumatism. Medorrhinum infants sleep flat on their stomach, rear in the air. They often have a red rash (erythema) on the buttocks. The children are sensitive to humidity. Their legs are constantly in motion while they are seated.
In the eyes, we find chronic conjunctivitis, with the lids stuck together in the mornings, and astigmatism.
Amelioration at the seaside is a good symptom of this remedy. On the skin, we find a large number of small molluscum pendulum around the neck. "Time is money."

Medorrhinum tries to control time. These individuals are constantly projecting their minds into the future, making them clairvoyant, which makes this a remedy for mediums who predict the future. On the other hand, lack of control, or anarchy, leads to skin tumors and cancer.[19]

Natrum muraticum

Great emaciation; loosing flesh while living well; throat and neck of child emaciate rapidly during summer complaint. Great liability to take cold. Irritability: child cross when spoken to; crying from slightest cause; gets into a passion about trifles, especially when consoled with. Children slow in learning to walk.[3] Child will be slow in learning to speak. Small and underweight child.[12] Warts on palms of hands.[7]

Silicea

Umbilicated eruptions with offensive pus. Itching only in daytime and evening.[1]

Extremely chilly patient; profuse, offensive discharges; glandular affinity; large head and distended abdomen, weak ankles; [1,51] open fontanelles and sutures;[1] slow in learning to walk; constipation, stool being partly expelled recedes back again; all symptoms worse by cold except stomach complaints; children are obstinate, head strong, cry when spoken kindly to, nervous, apprehensive, oversensitive, irritable and fearful.

- Tuberous spots on skin of light red color.
- Eruptions heal with difficulty and suppurate easily.[51]

Sulfanilamidum

Indicated in molluscum granulosum.[47]

Sulphur

Molluscum in a child; body and limbs covered with soft, round, smooth, apparently painless tumours with broad base. At first of the colour of the skin, then assuming a bluish, and finally a purple or pinkish hue; found on puncture to contain a semi-fluid, sebaceous matter. These tumours vary in size from that of a large bean to a filbert, and were found in all stages of development at the same time, about eighty in number. After Sulphur, no new tumours formed, and the old shrivelled up, without discharging.

- Dr. C. Wesselhoeft.[23,54]

Teucrium marum verum

Indicated remedy in molluscum contagiosum.

Thuja occidentalis

It is a remedy for molluscum.[4] Chilly patient; dark, fleshy children with greasy face; dark hair and unhealthy Skin, looks dirty with brownish spots; perspiration on uncovered parts, smells sweetish and strong; complaints worse damp, humid weather; lazy.

- Eruptions only on covered parts
- Umbilical form of eruptions.[51]

In elderly children, we obtain history of nightmares, dreams of falling and someone chasing and startling in sleep. Here too *thuja* works very well. The remedy works from within outwards. The eruptions become big and they burst open and then subside.[55]

Tuberculinum

It has a good role in establishing cure if given as intercurrent.[1]

CONVENTIONAL TREATMENT

Surgical removal of molluscum contagiosum by curettage has been used for many years. Children will usually need prior application of topical anaesthetic cream with strict observance of the maximum safe dose. Damage to the lesions by squeezing the contents or insertion of a pointed cocktail stick may stimulate inflammation and clearance.

Cryotherapy is effective and commonly used in older children and adults, but needs to be repeated at 3–4 weekly intervals. The carbon dioxide or pulsed dye lasers have produced useful effects but like curettage, can cause scars. Photodynamic therapy has also been used with effect.

Many topical agents can be used to produce mild to moderate inflammation and hence potentially stimulate the development of an immune response against the virus. Cantharidin, trichloroacetic acid and diluted liquefied phenol are strong irritants which can both cause pain, blistering and scarring but with careful application and appropriate dilution can increase lesion clearance. Topical salicylic acid preparations, tretinoin, adapalene, nitric oxide cream and potassium hydroxide solution all lead to an irritant reaction but if the strength of preparation and the frequency of application are adjusted, individuals can tolerate repeated treatments until resolution occurs.[9]

However, a Cochrane Database analysis of treatments for molluscum contagiosum, which identified only five therapeutic studies of high quality, found that no single intervention is convincingly effective for the treatment of molluscum contagiosum.[57]

Few of the commonly used conventional therapies are as follows:

Freezing/Cryotherapy

The lesions are frozen with liquid nitrogen or dry ice at an interval of 2-3 weeks until the lesions are cleared. Though this method is quite effective it sometimes causes hypopigmentation or hyperpigmentation and scarring.

Evisceration

The core of the lesion is excavated with help of sharp instruments like scalpel, sharp tooth pick, edge of a glass slide. Patients themselves can carry out this procedure if carefully taught. This method is though not applicable to children as the procedure can be really painful.

Scraping/ Curettage

The lesions are scraped off with the help of sharp instruments. Use of topical anesthetic agents is advised to combat the pain. The method has an advantage of providing a reliable tissue sample for the confirmation of diagnosis of Molluscum Contagious.

Electrosurgery/ Laser Cautery

The lesions are burnt either with electric cautery or Laser beam is used to burn the spots.

Squeezing

A local anesthetic cream is applied to the area and left on under a plastic film for one hour before the procedure. Then the lesion is squeezed out with the help of forceps or sharp sticks.

Tape stripping

Sterilized adhesive tapes are repeatedly applied and removed over the lesions and removed so that the superficial epidermis is effectively removed. However, repeated use of the same strip is likely to spread the virus to adjacent, uninvolved skin.

Chemical applications

Which are prepared with metal silver as the base can prevent the bacterial infection and hence enhance the process of recovery.[40]

BIBLIOGRAPHY

1. Acharya A. Molluscum contagiosum and Homeopathy. 2010. Available at: URL:http://www.homeorizon.com/homeopathic-articles/dermatology/molluscum-warts-cure.
2. Adler M, Cowan F, French P, Mitchell H, Richens J editors. ABC of Sexually Transmitted Infections. 5th ed. UK: BMJ Publishing Group Ltd; 2004. p. 59.
3. Allen HC. Keynotes rearranged and classified with leading remedies of the materia medica and bowel nosodes. New Delhi, India: B. Jain Publishers (P) Ltd; 2004. p. 72-3, 212-3.
4. Allen TF. Hand Book of Materia Medica and Homoeopathic Therapeutics. New Delhi, India: B. Jain Publishers (P) Ltd; 1992. p. 1122.

5. Bandyopadhyay D. Molluscum contagiosum - Dermatology lecture notes. Available at: URL:http://dermind.tripod.com/mc.htm.
6. Banerjea S. Miasmatic prescribing – Its philosophy, diagnostic classifications, clinical tips, miasmatic repertory, miasmatic weightage of medicines and case illustrations. 2nd ed. New Delhi, India: B. Jain Publishers (P) Ltd; 2010. p. 231.
7. Boericke W. Pocket manual of homoeopathic materia medica with Indian medicine and repertory. New Delhi, India: Indian Books & Periodicals Publishers; 2006. p. 144, 462,910.
8. Bolongnia JL, Jorizzo JL, Rapini RP editors. Dermatology. 2nd ed. UK: Mosby Elsevier, An imprint of Elsevier limited; 2008. P. 1229-32. (vol 1).
9. Burns T, Breathnach S, Cox N, Griffiths C. editors. Rook's textbook of dermatology. 8th ed. Chichester, West Sussex, UK: Blackwell Publishing Ltd; 2010. p. 33.11-2. (vol 2).
10. Clarke JH. A clinical repertory to the dictionary of materia medica. New Delhi, India: B Jain Publishers (P) Ltd; 2007. p. 78.
11. Dearborn FM. Diseases of the skin including the exanthemata – For the use of General Practitioners and Advanced students. New Delhi, India: B. Jain Publishers (P) Ltd; 2006. p. 3-7, 12-3, 323.
12. Douglas MB. Children's types. New Delhi, India: Indian Books & Periodicals Publishers; 2008. p. 3, 20.
13. Douglass ME. Skin diseases - Their description, Etiology, Diagnosis and Treatment according to the Law of Similars. New Delhi, India: B. Jain Publishers (P) Ltd; 2006. p. 426-7.
14. English JSC. General dermatology - An Atlas of Diagnosis and Management. UK: Clinical Publishing – An imprint of Atlas Medical Publishing Ltd; 2007. p. 120.
15. Falco OB, Plewig G, Wolff HH, Winkelmann editors. Dermatology. New York, UAS: Springer – Verlag Berlin Heidelberg; 1991. p. 21-2.

16. Fields BN, Knipe DM, Howley MD. editors. Fields virology. 4th ed. USA: Lippincott Williams & Wilkins Publishers; 2001. p. 90. (vol 2).
17. Fisher CE. A hand book on the diseases of children and their Homoeopathic treatment. New Delhi, India: B. Jain Publishers (P) Ltd; 2004. p. 753.
18. Gartner LP, Hiatt JL. Colour text book of histology. 3rd ed. Philadelphia, USA: Saunders Elsevier; 2007. p. 328.
19. Grandgeorge D. The spirit of homeopathic medicines. [Encyclopaedia Homeopathica]. Version 2.2.1. Archibel; 2006.
20. Gupta R, Manchanda RK. Text book of dermatology for homoeopaths. New Delhi, India: B. Jain Publishers (P) Ltd; 2005. p. 90-1.
21. Hale EM. Special therapeutics of the new remedies [Encyclopaedia Homeopathica]. Version 2.2.1. Archibel; 2006.
22. Handbook on homoeopathy for mother and child care. New Dehli, India: Central Council for Research in Homoeopathy; 2008. p. 290-2.
23. Hering C. Guiding Symptoms of our materia medica. New Delhi, India: B. Jain Publishers (P) Ltd; 1897. p. 182. (vol 10).
24. Holmes KK, Mardh PA, Sparling PF, Lemon SM, Stamm WE, Piot P, et all editors. Sexually transmitted diseases. 3rd ed. USA: McGraw – Hill Companies, Inc; 1999. p. 385-6, 388.
25. Hoyne TS. Clinical Therapeutics. New Delhi, India: B. Jain Publishers (P) Ltd; 1995. p. 169. (vol 1).
26. Hunter JAA, Savin JA, Dahl MV. Clinical dermatology. 3rd ed. Massachusetts, USA: Blackwell Science Ltd; 2003. p. 29-33, 210.
27. Inamadar CA, Sacchidanand S. Text book of pediatric dermatology. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2009. p. 139.
28. International Foundation for Homeopathy: Case Conference Proceedings 1991 [Encyclopaedia Homeopathica]. Version 2.2.1. Archibel; 2006.

29. Jenson BH, Baltimore SR. Pediatric infectious diseases - Principle & Practice. 2nd ed. Philadelphia, USA: W B Saunders Company; 2002. p. 569.
30. Kelly AP, Taylor SC. Dermatology for Skin of Color. USA: McGraw – Hill Companies, Inc; 2009. p. 593.
31. Kempf W, Hantschke M, Kutzner H, Burgdorf WHC editors. Dermatopathology. New York, UAS: Springer – Verlag Berlin Heidelberg; 2008. p. 34-5.
32. Krowchuk DP, Mancini AJ. Pediatric dermatology - A quick reference guide. New Delhi, India: Jaypee Brothers Medical Publishers (P) Ltd.; 2010. p. 1-4, 6, 75-7.
33. Liga Medicorum Homoeopathica Internationalis 1988 [Encyclopaedia Homeopathica]. Version 2.2.1. Archibel; 2006.
34. Lilienthal S. Homoeopathic therapeutics. New Delhi, India: Indian Books & Periodicals Publishers; 2006. p. 752.
35. Manchanda RK, Mehan N, Sur BR, Bahl R, Atey R. Warts. 2011. Available at: URL:http://delhi.gov.in/wps/wcm/connect/doit-homeopathy/Homeopathy/Home/Clinical+Studies+And+Publications/Warts.
36. Marieb EN. Human anatomy and physiology. 6th ed. Delhi, India: Dorling Kindersley (India) Pvt. Ltd.; 2006. p. 152.
37. Master FJ. The State of mind that influences the foetus. New Delhi, India: B. Jain Publishers (P) Ltd; 2005. p. 26.
38. Mescher AL. Junqueira's basic histology.12th ed. USA: MC Graw Hill Companies Inc; 2010. p. 316-31.
39. Murphy R. Homoeopathic medical repertory - A modern alphabetical repertory. 2nd ed. New Delhi, India: B. Jain Publishers (P) Ltd; 2004. p. 425.
40. Non-Surgical, Effective and Safe treatment of Molluscum Contagiosum. Available at: URL:http://www.specialityclinic.com/Molluscum.aspx.
41. Ruocco E, Donnarumma G, Baroni A, Tufano AM. Bacterial and Viral Skin Diseases. Dermatologic clinics. 2007 October; vol 25(4). p. 671.

42. Schachner AL, Hansen CR editors. Pediatric dermatology. 2nd ed. USA: Churchill Livingstone; 1995. p. 1278–9. (vol 2).

43. Schachner AL, Hansen CR editors. Pediatric dermatology. 3rd ed. USA: MOSBY An imprint of Elsevier Limited; 2003. p. 1090–1.

44. Schroyens F. Synthesis Repertorium Homeopathicum Syntheticum. 9.1 ed. New Delhi, India: B. Jain Publishers (P) Ltd; 2007. p. 1856.

45. Smiths T. Cancer, a deeper understanding – Carcinosinum. Homoeopathic links 1998; spring.

46. Standring S. Gray's anatomy – The anatomical basis of clinical practice. 40th ed. Philadelphia, USA: Churchill Livingstone, an imprint of Elsevier limited; 2008. p. 145.

47. Stephenson J. A materia medica and repertory. New Delhi, India: B. Jain Publishers (P) Ltd; 1991. p. 87.

48. Thappa MD. Clinical pediatric dermatology. Noida, India: Elsevier, A division of Reed Elsevier India Pvt. Ltd; 2009. p. 50.

49. Tiwari SK. Homoeopathy and child care - principles, therapeutics, children's type, repertory. New Delhi, India: B Jain Publishers (P) Ltd; 2010. p. 303.

50. Tortora GJ, Derrickson B. Principles of anatomy and physiology. 12th ed. Hoboken, USA: John Wiley & Sons, Inc; 2009. p. 147-52, 154-5, 157-8, 160-2, 164-5, 167.

51. Valia GR, Valia RA, IADVL text book of dermatology. 3rd ed. Mumbai, India: Bhalani publishing house; 2008. p. 333. (vol I).

52. Van zandvoort R. Complete Repertory 2003 [Radar Repertory Program]. Version 10.0.028. Archibel; 2007.

53. Van zandvoort R. Repertorium universale III [Radar Repertory Program]. Version 10.0.028. Archibel; 2007.

54. Vermeulen F. Concordant materia medica [Encyclopaedia Homeopathica].

Version 2.2.1. Archibel; 2006.

55. Wadia SR. Homoeopathy in children diseases [Encyclopaedia Homeopathica]. Version 2.2.1. Archibel; 2006.

56. Weedon D. Skin pathology. 2nd ed. Philadelphia, USA: Churchill Livingstone, an imprint of Elsevier limited; 2005. p. 693.

57. Wolff K, Goldsmith AL, Katz IS, Gilchrest AB, Paller SA, Leffel JD editors. Fitzpatrick's dermatology in general medicine. 7th ed. USA: MC Graw Hill Companies Inc; 2008. p. 245-6, 1077, 1425, 1911–3. (vol 1 & 2).