Complete Summary

GUIDELINE TITLE

Management of molluscum contagiosum.

BIBLIOGRAPHIC SOURCE(S)

University of Texas, School of Nursing, Family Nurse Practitioner Program. Management of molluscum contagiosum. Austin (TX): University of Texas, School of Nursing; 2008 May. 12 p. [20 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Molluscum contagiosum virus infection

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Prevention
Treatment

CLINICAL SPECIALTY

Dermatology
Family Practice
Infectious Diseases
Internal Medicine
Nursing
Pediatrics

INTENDED USERS

Advanced Practice Nurses
Nurses
Physician Assistants
Physicians
Public Health Departments

GUIDELINE OBJECTIVE(S)

- To present a national guideline on the management of molluscum contagiosum
- To provide specific recommendations for patients

TARGET POPULATION

Patients in the United States with molluscum contagiosum

INTERVENTIONS AND PRACTICES CONSIDERED

Assessment/Diagnosis

1. Clinical features
2. Characteristic appearance of lesions
3. Microscopy or electron microscopy
4. Symptoms
5. Emotional and psychological discomfort
6. Cutaneous marker of immunodeficiency or disseminated fungal infection

Management/Treatment

1. No treatment
2. Management of dermatological symptoms/prevention of secondary infection
    - Patient education
        - Prevention of transmission to others, reinfection, secondary infection
        - Symptom management
        - Potential complications
    - Reduction of atopic irritants
    - Antihistamines
    - Topical corticosteroids
3. Direct lesion trauma
    - Curettage
    - Cantharidin solution

4. Immune response stimulation
    - Imiquimod topical cream
    - Cimetidine
5. Follow-up for response to treatment and secondary infection
6. Referral to specialist

MAJOR OUTCOMES CONSIDERED

- Efficacy of treatment
- Patient satisfaction with treatment
- Rate of secondary infection

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Searches were conducted in PubMed, Cochrane Library, UpToDate, Medscape, NGC Guidelines, CINAHL. Searches of guidelines and publications were generated by individual specialties.

NUMBER OF SOURCE DOCUMENTS

7

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus
Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Quality of Evidence (Based on the U.S. Preventive Services Task Force Ratings)

Good: Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.

Fair: Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies, generalizability to routine practice, or indirect nature of the evidence of health outcomes.

Poor: Evidence is insufficient to assess the effects on health outcomes because of limited number of power of studies, important flaws in their designs or conduct,

gaps in the chain of evidence, or lack of information on important health outcomes.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

A systematic review of relevant resources was conducted, and articles that did not meet specific criteria were not utilized in creating the guideline.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Existing clinical practice guidelines were reviewed in order to understand the current evaluation, management and treatments of molluscum contagiosum for the scope of this guideline. The creating group incorporated existing guidelines and recommended changes since the guidelines were originally developed in 2001.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grading of Recommendations (Based on the U.S. Preventive Services Task Force Ratings)

A. There is good evidence that the recommendation improves important health outcomes. Benefits substantially outweigh harms.

B. There is at least fair evidence that the recommendation improves important health outcomes. Benefits outweigh harms.

C. There is at least fair evidence that the service can improve health outcomes but the balance of benefits and harms is too close to justify a general recommendation.

D. There is at least fair evidence that the recommendation is ineffective or that harms outweigh benefits.

I. Evidence that the service is effective is lacking, of poor quality or conflicting and the balance of benefits and harms cannot be determined.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

A draft guideline was submitted to an internal and external review groups for review. The feedback received was then incorporated in the final guideline suggestions.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Strength of recommendations (A, B, C, D, I) and quality of evidence (good, fair, poor) are defined at the end of "Major Recommendations" field.

General Recommendations

1. Stress benign but contagious nature of disease.
2. Limit physical contact with infected areas of skin and good hygiene.
3. Instruct patient to avoid scratching of lesions.
4. In small children keep infected areas covered with clothing.
5. In adolescent and adult patients, this disease is usually sexually transmitted, so encourage safe sex and abstinence. It is unclear whether condoms or other barrier methods provide adequate protection. (Crowe, 2007) **(Recommendation A, Good)**.

Diagnosis

1. Diagnosis is usually made by the characteristic appearance of the lesions.
2. If necessary, electron microscopic (EM) examination can confirm the clinical diagnosis. EM examination would show the typical brick-shaped poxvirus particles, similar to those of smallpox.
3. Molluscum contagiosum virus (MCV) cannot be grown in tissue culture.
4. The thick white central core can be smeared on a slide and stained or unstained, large brick shaped bodies will be observed. (Crowe, 2007) **(Recommendation A, Good)**.

Management/Considerations

1. Management of molluscum should be based on a case-by-case basis including: the extent and site of lesions, patient discomfort and patient preference of treatment.
2. The infection is generally self limiting but may take 6 months to 5 years to resolve (Tyring, 2003). Most patients are rarely satisfied with non-intervention.
3. Choosing non-intervention can allow the lesions to multiply by autoinoculation, increasing contagion, increasing occurrence of scarring, and

causing discomfort from dermatitis that may lead to secondary bacterial infections.

4. Some patients may have psychological distress including anxiety/depression regarding appearance and fear of transmission. **(Recommendation A, Good)**.

Treatment Options

1. None
    A. Monitor and educate on minimizing transmission and autoinoculation. Molluscum virus transmission occurs during close physical contact, by contact with a fomite on objects touched by infected child, and by autoinoculation. **(Recommendation A, Good)**.
    B. Educate the patient not to scratch/play with lesions, avoid sharing towels, bathtubs, and limit direct physical contacts. **(Recommendation A, Good)**.

2. Alleviating dermatological symptoms/preventing secondary infection (pruritus, erythema)
    A. Reduce atopic irritants: use fragrance-free soaps and lotions, lukewarm baths, prevent skin from over-drying, reduce other causes of dermatitis to prevent skin susceptibility to molluscum. **(Recommendation B, Good)**.
    B. Antihistamines: Prevention of pruritus, reducing inflammation, and reducing autoinoculation by scratching. **(Recommendation B, Good)**.
    C. Topical corticosteroids: Management of atopic symptoms. May consider short-term use of topical corticosteroids. Class 3 or 4 corticosteroid ointment is appropriate for the body, class 6 or 7 for the face. May be helpful for reversing infections by removing underlying atopic dermatitis (Brown et al., 2006). Although intermittent topical corticosteroid use is a common therapy for atopic dermatitis, maintenance topical corticosteroid use should be avoided due to concerns about potential side effects such as skin atrophy and immunosuppression. (Sanfilippo et al., 2003) **(Recommendation B, Fair)**.

3. Direct lesion trauma
    A. Curettage: performed by experienced provider under local or topical anesthesia. Limited use of EMLA (eutectic mixture of local anesthetics) topical cream can relieve local discomfort with therapy. Care should be taken not to use topical lidocaine mixtures over a body surface area in excess of the maximum recommended to avoid central nervous system (CNS) toxicity (Brown et al., 2006). **(Recommendation B, Good)**.
    B. Cantharidin solution 0.7%-0.9%: apply to lesions 1 time per week until lesions resolve (in office treatment). Alternate dosing schedule: apply monthly to visible lesions and wash off after 2 to 6 hours. Avoid treating >20 lesions at one session to prevent id (the same) reaction (Brown et al., 2006). Cantharidin should not be used on the face. It should be applied sparingly, avoiding contact with surrounding healthy skin. Patients should be advised to rinse the treated areas with copious

amounts of water 2-4 hours after treatment or if discomfort or vesiculation occurs (Silverberg, Sidbury, & Mancini, 2000). **(Recommendation B, Good)**.

4. Immune response stimulation
    A. Imiquimod topical 1% or 5% cream to be applied to molluscum contagiosum lesions three times per week for <16 weeks and washed off after 6 to 10 hours. Imiquimod stimulates cell-mediated immunity to aid in the regression of mollusca. **(Recommendation B, Fair)**.
    B. Cimetidine 800 mg by mouth 3 times a day or 30 to 50 mg/kg/day for children in divided doses for 3 months. There has been some evidence to support the use of high dose cimetidine in patients with viral warts including molluscum contagiosum. It is projected that cimetidine stimulates cell-mediated immunity by increasing the number of CD4 lymphocytes which assists in wart regression. **(Recommendation C, Fair)**.

5. Follow up: Follow up as specific therapies or treatments indicate.
6. Referral: for cases outside of provider's professional experience, numerous lesions >50, lesions around eyes, or for cases not responding to treatments. **(Recommendation A, Good)**.

Considerations

A. Molluscum may serve as a cutaneous marker of severe immunodeficiency and sometimes is the first indication of human immunodeficiency virus (HIV) infection-typically a more extensive, disfiguring infection that is not self-limiting (Stulberg & Hutchinson, 2003).
B. Children who are febrile, have more than 50 lesions, or whose response to therapy is limited may have disseminated fungal infections or immunodeficiency (Silverberg, 2007).

Complications

A. Secondary inflammation
B. Bacterial infections
C. Scarring
D. Emotional and psychological discomfort
E. Infectivity
F. Autoinoculation

Prognosis

Generally excellent because the disease is self limited and benign. In healthy patients, treatments are usually effective.

Definitions:

Quality of Evidence (Based on U.S. Preventive Services Task Force [USPSTF] Ratings)

Good: Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.

Fair: Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies, generalizability to routine practice, or indirect nature of the evidence of health outcomes.

Poor: Evidence is insufficient to assess the effects on health outcomes because of limited number of power of studies, important flaws in their designs or conduct, gaps in the chain of evidence, or lack of information on important health outcomes.

Grading of Recommendations (Based on USPSTF Ratings)

A. There is good evidence that the recommendation improves important health outcomes. Benefits substantially outweigh harms.

B. There is at least fair evidence that the recommendation improves important health outcomes. Benefits outweigh harms.

C. There is at least fair evidence that the service can improve health outcomes but the balance of benefits and harms is too close to justify a general recommendation.

D. There is at least fair evidence that the recommendation is ineffective or that harms outweigh benefits.

I. Evidence that the service is effective is lacking, of poor quality or conflicting and the balance of benefits and harms cannot be determined.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for selected recommendations (see "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Appropriate diagnosis and management of molluscum contagiosum virus (MCV) infection
- Patient satisfaction in the management of MCV infection
- Decreased transmission of MCV infection
- Decreased complications of MCV infection

POTENTIAL HARMS

- Choosing non-intervention can allow the lesions to multiply by autoinoculation, increasing contagion, increasing occurrence of scarring, and causing discomfort from dermatitis that may lead to secondary bacterial infections.
- *Cantharidin* may produce significant blistering with resulting pigmentary changes, especially in dark-skinned individuals. Cantharidin should not be used on the face. It should be applied sparingly, avoiding contact with surrounding healthy skin.
- Clinical trials looking at the efficacy of *corticosteroids* have not been performed. One anecdotal report in 1971 suggested a worsening of molluscum with topical corticosteroids.
- *Imiquimod* 1% and 5% cream is associated with application site reactions such as edema, erythema, flaking, pruritus, and vesicle formation. Exposure to sunlight should be avoided due to increased risk for sunburn.
- *Cimetidine* may cause diarrhea, nausea, abdominal pain, dry mouth, headache, and dizziness. Caution should be exercised with the use of cimetidine due to multiple potential drug interactions.

CONTRAINDICATIONS

CONTRAINDICATIONS

Cantharidin should not be used in pregnancy: Category C

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- Additional well-designed prospective blinded randomized controlled studies are needed to provide high quality clinical trial evidence upon which to base clinical decision-making. No reliable evidence based recommendations can be given for the treatment of molluscum contagiosum at present.
- These published guidelines provide a general framework for managing patients with molluscum contagiosum. The major recommendations are not intended to be utilized all inclusively, and decisions must be based on individual symptoms and goals. The skill and judgment of the health care provider must dictate treatment decisions.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The composition group reminds the reader that guidelines in themselves are of no use unless they are implemented systematically. The following auditable outcome measure is provided.

- The number of patient attendance to achieve resolution.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

University of Texas, School of Nursing, Family Nurse Practitioner Program. Management of molluscum contagiosum. Austin (TX): University of Texas, School of Nursing; 2008 May. 12 p. [20 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2008 May

GUIDELINE DEVELOPER(S)

University of Texas at Austin School of Nursing, Family Nurse Practitioner Program - Academic Institution

SOURCE(S) OF FUNDING

University of Texas at Austin, School of Nursing, Family Nurse Practitioner Program

GUIDELINE COMMITTEE

Practice Guidelines Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Authors: Nicole E. Goodman, RN, MSN, FNP; Holly Kahle, RN, MSN, FNP; Kate Holub, RN, MSN, FNP

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

None stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: None available.

Print copies: Available from the University of Texas at Austin, School of Nursing, 1700 Red River, Austin, Texas, 78701-1499

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI Institute on September 18, 2008.

COPYRIGHT STATEMENT

DISCLAIMER

NGC DISCLAIMER

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at http://www.guideline.gov/about/inclusion.aspx .

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

Date Modified: 11/24/2008