Warts and Molluscum

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Types of Warts
- Verruca: HPV
  - Verruca Vulgaris (Common Warts)
  - Verruca Plantaris (Plantar Warts)
  - Verruca Plana (Flat Warts)
  - Condyloma Acuminatum (Genital Warts)

Molluscum Contagiosum: Poxvirus

Verruca
- Localized human papilloma virus infection of the epidermal skin cells
- Spread by person to person contact and auto-inoculation eg, nail biting, scratching or picking
- Resolves spontaneously: 25% in 6 months and 65% within 2 years.

Molluscum
- May be spread by fomite or swimming pool exposure
- More commonly found in atopics, as an STD, and in immunocompromised patients eg. HIV infection
- Can spontaneously clear over years

What Do I tell the Patient?
Goal of treatment is to do no harm nor leave scars.
Assess if the patient or parent desires treatment given that warts go away without any treatment after several years.
Stress that even with “the best and aggressive treatments”, warts tend to recur 50% of the time.
Local injury of the viral infected skin cells by any method stimulates normal wound healing with replacement of the wart with more normal skin over repeated series of treatments.

Once is Not Enough
Will need multiple regular office visits every 3-4wks for about 3-6 months along with daily home treatment with otc products “Homework”
Discuss the various methods of treatment and the degree of pain/discomfort associated with each method.
Stress that surgical removal by cold steel or laser is not recommended due to high risk of scarring, pain, and recurrence.
Strategies for Wart Treatment
- Paring or filing to thin the epidermal layer
- Maceration or softening with moisture by occlusion with tape (Duct Tape)
- Keratolytics to dissolve the epidermal layer eg. Salicyclic acid, dichloracetic acid
- Blister promotion: cryotherapy, cantharidin
- Immune system enhancement: imiquimod, cimetidine, dinitrochlorobenzene (DNCB), IL Candida antigen

Wart Treatment
- 17% Salicyclic Acid Soln or gel otc QD-BID
- 40% Salicyclic Acid Patch QD otc (Mediplast, Duofilm) or stick (Wart Stick-Pedifix)
- Duct Tape QD x 6 days and repeat
- Cryotherapy
- 80% bichloroacetic acid
- Cantharidin
- Cimetidine 40 mg/kg/day for 12 weeks
- Any combination of the above.

Resistant cases
- 5% Imiquimod cream (Aldara)
- 0.5% Podofilox gel (Condylox )
- 5-Fluorouracil cream (Efudex)
- IL Candida antigen +/- Trichophyton 1:1,
- Rarely Carbon Dioxide Laser or Pulsed-Dye Laser
- Rarely surgical excision or curettage and dessication

Wart Treatment Tips
- Remove rings for warts on fingers/ toes
- For thick warts, pare down epidermal layer until pin-point bleeding occurs (15 blade scalpel with gloves) or patient complains of pain.
- Use cotton tipped swab saturated with 20% aluminum chloride solution for chemical cauterization of bleeders.

Pain Control Pearls
- Recommend low pain treatment with topical otc salicyclic products
- Anesthetic cream of 4% lidocaine (LM-X4), otc, to be applied 30 minutes before treatment to control pain and or after tx
- NSAIDs, otc, 30 minutes before procedure eg. acetominophen, ibuprofen, naproxen
Cryotherapy Pitfalls

- Side effects include: blistering, pain, swelling, hyper or hypo-pigmentation of the skin, nail changes if over treat proximal nail fold area, nerve damage if over treat the lateral digit area.
- Not desirable to use on plantar warts if patient is on feet for long periods of time.
- Goal to allow patient to ambulate without significant discomfort.

Cryotherapy with liquid nitrogen

- Liquid nitrogen is -195.6 °C
- Use Cryogun or fluffy cotton swab with liquid nitrogen eg. OB swab
- Freeze center of wart until 1-2 mm halo of normal skin around wart freezes. May need repeat freeze-thaw-cycle for thicker skin areas such as the foot.

Acid Therapy

- Can use alone or with cryotherapy
- Cantharidin compound
  - Apply with wooden stick end of swab to wart surface only
  - +/- Cover with bandage
  - Wash off in 2-4 hours

Molluscum Treatment

- Cantharidin : Use blunt end of wooden cotton tipped applicator to apply single drop. Wash off in 2-4 hrs.
- Cryotherapy
  - Cryogun
  - Q-tip
  - Forceps
- Curettage after 30mins of LMX-4 application
- Tape stripping 20x / day
- Tretinoin 0.025% cream/ gel daily

Documentation of All Patients.

- All New patients are evaluated and diagnosed by physician and this should be documented in HC note
- Use SOAP format
- Location, size, and approximate number of warts to help assess degree of effectiveness of treatment over time
- Patient was advised of anticipated results of treatments and side effects, eg. Informed Consent obtained
- If patient is a minor, Parent or Legal Guardian consent was obtained.

**Documentation Requirements for All Patients**
- Use SOAP Note format
- List all treatment types used and recommended
- Patient’s reaction to treatment
- Final instructions with patient education handouts and follow up plans
- Document who your mentor was

**When to Consult with the Dermatologist**
- All New patients to clinic
- Change in therapy
- Warts on face
- Warts are larger than 1/2 inch
- No response after 2 visits following routine protocol
- Warts are infected or unusually painful
- Patient cannot tolerate treatment
- Patient requests to see dermatologist
- Patient has an unexpected adverse reaction during treatment

**Example of a Smartphrase or a Consult or New Patient**

I have been consulted by Dr.*** for evaluation and treatment for ***.

***New Patient to Dermatology
Subjective: (.s)
CC: warts on fingers (.rfv)
HPI: 16yo with warts on fingers x 2 yrs. Growing and spreading. Only using over the counter products without help.
PMH: none (.pmh)
Meds: none (.takmed)
Allergies: none (.alg)

Objective: (.o)
Vital Signs (.vs)
Hands: warty papules on 4/10 fingers x6. Largest is 6mm in size.

Assessment/ Plan (.a / .p)
1. Warts
Pathogenesis of warts discussed including methods of treatment including to not treat. Risks and benefits discussed and patient elects to proceed with treatment. All questions answered.
At the direction of Dr. Wong, I performed cryotherapy to 6 warts. Home treatment with salicyclic products recommended.

Follow up in 1 months.
Mentoring physician: Dr. Linda Wong
Clear Face, RN
Kaiser Permanente
Baldwin Park Medical Center
Today’s date (.td)

I have evaluated and diagnosed the patient and have directed the nurse in the management and follow up.
Linda Wong, MD
Today’s date (.td)

**Home Therapy – Homework with Over The Counter Products**
- 17% salicylic acid solution and gels
- 40% salicylic acid patch or stick
- Duct Tape QD x 6 days and repeat
- Encourage daily use for 2 months
- Stress need for home therapy while receiving office treatments to speed up clearance rate of warts.

**What If It’s Not A Wart?**
Differential Diagnoses
- Seborrheic keratosis
- Skin tag
- Hard corn
- Epidermal nevus
- Melanocytic nevus
- Actinic keratosis