



COMMON SKIN INFECTIONS I

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INFECTIONS

- BACTERIAL INFECTIONS
- VIRAL INFECTIONS
- FUNGAL INFECTIONS
- INFESTATIONS



BACTERIAL INFECTIONS



Bacterial Infections

- **Predisposing factors**
 - Previously damaged skin
 - Impaired host immunity
- **Normal skin flora**
 - Coagulase negative staphylococci
 - Diphtheroids

1) Impetigo

- **Superficial skin infection**
- **Etiology:**
 - Strep pyogen
 - Staph aureus
- **Age: children (2-5 yr)**

Clinical Features

- Presents as thin-walled vesiculopustules on an erythematous base
- Common sites: face, extremities
- Commonly assoc. with minor skin trauma
- Systemic symptoms (not usual)
- Rarely complicated by APSGN (nephritogenic strains)




Investigations

- **Bacterial cultures: confirmatory**
- **Serology: rarely indicated**



Management

- **Topical antibiotics**
 - **Localized disease**
 - **Systemic antibiotics**
 - **Extensive lesions**
 - **Infection with nephritogenic strains**
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Bullous Impetigo

- Variant of impetigo
- Purely caused by *s. aureus* (group II phage type 71)
- Clinically presents as superficial flaccid vesiculopustules
 - *rupture*
 - *spread & coalescence of lesions*
 - *rounded denuded areas*



Bullous Impetigo

- **Treatment: anti-staph systemic antibiotic**
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2) Cellulitis


- Is an acute bacterial suppurative inflammation of the skin, particularly the deeper subcutaneous tissues
- Etiologic agents
 - Strep A
 - Staph aureus
 - H. influenza

Clinical Features

- Preceding wound or trauma (1-2 days)
- Markedly red, tender, warm swelling with an edematous infiltrated appearance
- Common sites: face, lower extremities
- Systemic S/S: fever, tachycardia, LAP



- **H. influenzae cellulitis**

- **< 2 yrs old**
 - **The child may be extremely ill**
 - **Dusky red or bluish discoloration**
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Investigations


- Confirmation of diagnosis is difficult
- Cultures usually negative:
 - Needle aspiration
 - Skin biopsy
 - blood

Management

- **Depends on**
 - Identification of the affecting organisms
 - Use of appropriate systemic antibiotics
- **Recurrent and frequent cellulitis**
 - Measures to reduce recurrent cellulitis
 - Prophylactic antibiotics
- **Periorbital and orbital cellulitis**
 - Admission and involvement of ophthalmologist

Folliculitis

- Infection/ inflammation of the hair follicles
- Infectious vs. non-infectious
- **Infectious folliculitis:**
 - Primary vs. Secondary
- Etiology:
 - Bacterial/ fungal/ viral/ infestation
- Predisposing factors:

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- **Morphologic presentation:**
 - Papules/ pustules/ erosion/ crust
 - Follicular distribution
 - **Distibution:**
 - Face/ scalp/ legs/ trunk
 - **Investigations:**
 - **Course:** relapsing and chronic course



- **Treatment of bacterial folliculitis:**

- **Avoid predisposing factors**

- **Anti Bacterial**

- *Topical vs. systemic*

- *Directed by culture findings*

- *Carrier state*



VIRAL INFECTIONS



Viral infections

1. Warts
2. Molluscum contagiosum
3. Herpes simplex
4. Herpes zoster
5. varicella


A) Warts

- Warts (verrucae) are common and benign skin tumors resulting from infection of epithelial cells by human papillomavirus (HPV)
- **HPV**
 - Ds-DNA virus (papovavirus family)
 - > 60 types
 - Cannot be cultured
 - Humans are the only known reservoir

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- HPV 1 deep plantar wart
 - HPV 2,4 common warts
 - HPV 6,11 condyloma
acuminatum
 - HPV 16,18,31,33 genital neoplasia


Clinical Features

- Warts may affect any cutaneous or mucosal surface
- Different appearance
 - Involved sites
 - Type of infecting HPV
 - The immunologic makeup of the host
- **Types:**
 - *Common warts*
 - *Flat warts*
 - *Plantar warts*
 - *Genital warts*
 - *Others*

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- **How warts can be acquired?**
by contact with infected humans
 - ▣ **Requirements:**
 - Breaks in the skin
 - Host's susceptibility



Investigations

- **Diagnosis is usually clinical**
 - **Skin biopsy**
 - **PCR → detection and typing of HPVs**
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Management

- **Treatment options include**
 - Observation
 - Topical salicylic acid preparations
 - Destructive measures (cryotherapy, electrosurgery...etc)
 - others

2) Molluscum Contagiosum

- Common viral skin disease caused by a DNA poxvirus
- Children > adults
- Presents as asymptomatic smooth surface, skin colored, translucent papules several millimeters in diameter with a characteristic central umbilication
- Common sites: face, trunk, extremities
- Acquisition & resolution significantly affected by immunologic factors

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- Children with Molluscum
 - *Spontaneous involution in 6-12 months*
 - *Numerous papules on exposed sites*
 - Hundreds or thousands of lesions on immunocompromized patients
 - Diagnosis usually clinical
 - Treatment options
 - Observation
 - Destructive

3) Herpes Simplex

- Herpes Simplex Virus (HSV) infection is a common acute, self-limited usually recurrent eruption that characterized by small grouped vesicles on a red base
- **Etiology**
 - Herpesvirus hominis (Ds-DNA)
 - Primary infection followed by latency
 - Acquired by direct contact
 - Types:
 - a) *HSV-1: oral-labial infections*
 - b) *HSV-2: genital infections*

Clinical Features

■ A- Primary oral HSV

- HSV-1 > HSV-2
- Usually occurs in children
- May be subclinical
- Acute gingivostomatitis (commonest)
- Typically presents as crops of clear to yellow vesicles on erythematous background → crust
- Sites: face, lips, palate, tongue
- 2 weeks course

Clinical Features

▪ B- Primary Herpes Genitalis

- HSV-2 > HSV-1
- Usually acquired after sexual contact
- Presents with multiple erosions on the external genitalia

papule → vesicle → erosions

- Healing in 2-3 weeks
- Assoc: severe pain, dysuria, inguinal LAP
- > 50%: fever, headache, malaise

Clinical Features

- **C- Recurrent HSV infection**
 - HSV-2 > HSV-1
 - Prodrome of tingling and stinging
 - Reduced local symptoms, viral shedding and healing time than primary disease
 - Frequency decreased with time



Complications

- **Superimposed bacterial infections**
- **Eczema herpeticum**
- **Herpes encephalitis**
- **Erythema multiforme**



Diagnostic tools

- The Tzanck preparation
- Immunofluorescent testing
- Tissue cultures

Management

- Pt education
- Severe oral/genital HSV
 - *Oral anti-viral*
 - *No effect on recurrences*
- I.V. antiviral treatment
 - *Immunosuppressed pts*
 - *Eczema herpeticum*
 - *Severe primary genital HSV*
- Oral continuous suppressive oral anti-viral treatment for pts with frequent recurrences
- R/O other STDs (genital HSV)

4) Herpes Zoster

- An acute self-limited disease characterized by painful small grouped vesicles on an erythematous base and usually localized to one or two dermatomes
- Incidence increasing with advancing age
- Results from reactivation of latent Varicella-Zoster Virus (VZV)
- Clinical stages
 - Prodrome (1-4 days)
 - Vesicular stage
 - Crusted stage

■ **Diagnostic tools:** as HSV

■ **Management:**

□ **Symptomatic treatment**

□ **Oral anti-viral agent**

- *Within 48-72 hr*

- *High dose*

□? **Oral corticosteroids**

- *May decrease acute pain*

- *May reduce risk of PHN*

4) **Varicella (Chicken pox)**

- **Varicella is a highly contagious disease of childhood & occasionally adulthood caused by a primary infection with the VZV**
- **Transmitted by close contact and droplet infection**
- **90% of cases occur by the age of 15 yr**

Clinical Features

- Prodrome:
- Successive crops of pruritic lesions on the trunk, face and scalp
 - macule → papule → vesicle → crust
 - “dew drop on a rose petal”
- All stages of development in the same anatomic area at the same time
- Infectivity: 1-2 days prior to the rash
upto 5-7 days after the rash



- **Varicella in adults**

- Prodrome, extensive rash
- > constitutional symptoms
- Predisposition to more severe complications

- **Complications**

- Secondary bacterial infections
- Viral pneumonia/ encephalitis
- Reye's Syndrome
- Congenital/ neonatal Varicella

- **Diagnostic Tools:**

- **Management**

- Symptomatic

- Children

- *Benign disease*

- *Avoid aspirin*

- Early high-dose systemic anti-viral

- *Controversial in uncomplicated childhood varicella*

- *Immunocompromized*

- *Varicella pneumonia*

- VZIG

- Live attenuated vaccine: available