Dermatology/ Ophthalmology
Rapid Case Review
OHACEP EMR
2015

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Special Recognition
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Rash and Fever

Meningococcemia
Initially flu like, URI
- coryza, pharyngitis, fever, malaise, headache, vomiting, myalgias, arthralgias
- Rash very rapid - hrs to days
  - Diffuse mottling, Petechia,purpura
- Hypotension

Treatment
- Resuscitation
- Vancomycin, Ceftriaxone (PCeph3), Pen G, Chloramphicol
- Monitoring, Supportive Care

Prophylaxis -Close contacts
- Rifampin, Ceftriaxone, Cipro

Meningococcemia
MENIGOCOCCAL VACCINE
Approved for use March, 2005
Conjugate vaccine
Covers 4 of 5 major serotypes
Minimum age is 2 years old
Recommend give to pre-teens at ages 11-15, and high schoolers; and for everyone up to age 55 (Booster at 16-18)
All going to colleges or dormitories
Other high-risk (military etc.), no spleen, travel

Herpes Simplex (HSV-1, HSV-2)

Infections resolve without treatment
Recurrent infections often asymptomatic
Long term suppressive therapy greatly improves the quality of life if recurrent
Recurrence rate is affected by daily therapy (also reduces HIV2 progression)
Topical – reduces healing time, expensive
Oral–first sign or symptom, best within 72 Hours
Herpetic Whitlow

Gonococcemia

Neisseria gonorrhoeae
- 1-2% pts with gc
- Mainly women/ homosexuals
- Fever, tenosynovitis, migratory polyarthralgias

Septic vasculitis
- A distinctive characteristic is both Palpable purpura as well as pustular lesions
- Periarticular, distal ext.

Treatment
- 3rd gen cephalosporin

Toxic Shock

Toxigenic strain of staph aureus
- women using tampons
- Nasal packing

Major clinical criteria
- Fever > 102
- Erythroderma
- Late desquamation of skin
- Mucous membranes
- Hypotension

Multisystem affected
- Weakness, myalgias, abdominal pain, nausea, vomiting, diarrhea, headache, abnormal labs

Volume resuscitation, Penicillinase Resisitant Synthetic penicillin, antibiotics, supportive care

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Conjunctivitis Generalities (low specificity)

Discharge/Node type	**Etiology**
Purulent	Bacterial
Serous or clear	Viral
Stringy, white	Allergic
Preauricular lymph node enlargement	Viral/G.C.

Bacterial Conjunctivitis

Bacterial Conjunctivitis (uncomplicated/simple)

- Bilateral or unilateral
- Mucopurulent discharge of lids and lashes
- Visual acuity good
- Treatment: Antibiotic ointment or drops (Erythromycin, Sodium Sulfacetamide), fluoroquinolones

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GC Conjunctivitis

Gonococcal Conjunctivitis

- Purulent conjunctivitis
- Pre-auricular adenopathy (like viral)
- Neonates: Usually bilateral, 3-5 days post vaginal delivery
- Adults: Usually unilateral
- Treatment: Topical antibiotics are inadequate. Ceftriaxone IM/IV and topical ATB
- Concern is corneal perforation

Chlamydia Conjunctivitis = Trachoma

Chlamydia trachomatis Infection

- Obligate intracellular parasite
- Trachoma: Leading cause of preventable blindness
- Causes inclusion conjunctivitis of newborn between 5-14 days of delivery
- Characterized by lymphoid follicles in the conjunctiva
- Treatment: Adult:
  - Systemic Tetracycline
  - Systemic Azithromycin
  - Erythromycin Topical
- Neonatal: Systemic and topical erythromycin, 40-50 mg/kg/day for 2-3 weeks

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Staphylococcal Allergic conjunctivitis

- Red eye
- Thick discharge
- Sterile Ulcers at Limbus
- Allergic reaction to staph toxin
- Topical ATB (Sulfacetamide)
- Tobramycin
- Ophthalmology may add steroids

Viral Conjunctivitis

- Difficult to distinguish from bacterial

more frequently is bilateral
there is preauricular adenopathy
Tx = topical antibiotics to cover for superinfection
note despairing of redness in the area adjacent to the Iris

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epidemic keratoconjunctivivis

very contagious
adenovirus type VIII
epidemics are frequent
TX.
- Opthalmiology referrel
- Topical ATB
- Trifluorthymidine
- Steroids by Ophthalmology

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allergic conjunctivitis

characterized by cobblestone appearance under the lid
may have marked CHEMOSiS
treatment
- topical antihistamines
- vasoconstrictor's
- cool compresses
- allergen avoidance

Herpes Simplex Keratitis (HSK)

Localized pain/foreign body sensation
Fluorescein stain: dendritic pattern
Treatment: Antiviral agents cycloplegics, Refer Ophtho

Herpes Zoster Conjunctivitis

Almost always uniocular
5th cranial nerve
Cornea may be involved alone or nasociliary nerve which supplies tip of nose and cornea. If tip of nose is involved, suspect corneal involvement
- Hutchinson's Sign – If Tip nose

Corneal dendrite is classic finding
Treatment: Ophthalmology referral, no steroids except with ophtho, antiviral agents

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Staph Scalded Skin Syndrome(SSSS)

Staph Scalded Skin Syndrome
Etiology

Toxigenic strains Staph aureus
Type II phage

Clinical picture
Sudden onset fever, irritability w/ skin tenderness
Nikolsky positive
Flaccid blisters, erosions, desquamation of skin
Fluid and electrolytes loss
Heat loss
Portal for infection

Treatment
Burn Unit Care
Systemic antibiotics
Supportive care
No steroids
Excellent prognosis usually

Nikolsky's sign
Ready separation of the outer layer of the epidermis from the basal layer with sloughing of the skin produced by minor trauma, such as by exerting a sliding or rubbing pressure on the area involved, which may occur in
Pemphigus
Staph scalded skin syndrome
Toxic epidermal necrolysis (TENS)
Thermal burns.

KAWASAKI'S DISEASE (MCLNS)
M-F : 1.5 to 1;
Most under 5 years
Highest in Asians
Criteria: Fever (10 days (5-25 days)
plus 4 of 5:
Rash
Conjunctivitis
Distal extremity redness, swelling, desquamation
Strawberry tongue
Lymphadenopathy

KAWASAKI'S DISEASE
Etiology: unclear, maybe exotoxin
Coronary artery aneurysms! = 20% if untreated
Admit
IV Immune globulin, (Gammagard, Gamimune
Not in ED
ASA

Varicella/ Chickenpox
10 – 14 d incubation
Highly contagious in prodrome

Pruritis: Trim scrub fingernails
"dewdrop on a rose petal"
All stages macules, papules, vesicles, crusts present
"starry night" distribution

Complication – pneumonia,
cerebellitis

Anti-virals for chronically ill

Vaccine 85-90% effective post exposure

Previously 100 fatal cases /yr

ERYTHEMA INFECTIOSUM (FIFTH'S DISEASE)

Parvovirus B-19

Intense erythema of cheeks

Lacy eruption arm

Rash appears, no longer contagious

2nd trimester pregnancy- slight increase fetal death
Hydrops Fetalis

Historical Classification Only

First	Rubeola (Measles)
Second	Scarlet Fever
Third	Rubella (German Measles)
Fourth	"Duke's" Viral Exanthem
Fifth	Erythema Infectiosum
Sixth	Roseola (Exanthum Subitum)

Rubeola / Measles

Etiology - myxovirus

S/S = Initial 3-4 days of fever, **C**ough, **C**oryza, **C**onjunctivitis
Koplik's spots (rare) precede rash (Buccal mucosa near Stensons duct)
Maculopapular eruption begins on face and spreads inferiorly

Vaccination

Rubella/ German measles

Rubivirus
a.k.a. three-day measles
risk to women in first trimester
causes significant congenital defects in the first trimester
lesions on palate = Forcheimer spots

Scarlett fever

Pharyngitis
Fine papular
"sandpaper" like

circumoral pallor
denuded tongue
Antecubital, inguinal erythema
Viral exanthem may mimic
Complications
Rheumatic fever – 0.3% untreated
Nephritis (APSGN)
Abscess
Treatmen
PCN
Cephalosporin

Roseola Infantum(Exanthum subitum)

Abrupt high fever 2 - 4 days
Periorbital edema
posterior cervical lymphadenopathy
6 months – 2 years
Human Herpes Virus 6,7
Child "looks good"
When fever subsides rash begins
Rose pink maculopapular first on trunk, lasts 1-2 days
No therapy needed

Episcleritis

focal localized lesion
poorly understood
may be associated with systemic disease or local irritation or allergy
treatment
artificial tears
possibly steroids
refer to ophthalmology for follow-up

Scleritis

Possibly Infective – syphilis, TB, Zoster, leprosy
Possibly Autoimmune (Inflammatory) – RA, WG, SLE, PN, Goodpasture's, Chrohn's, Sarcoid
possibly Metabolic - gout
Can be necrotizing
Untreated – thinning, scleral defects, anterior uveitis, keratitis, cataract, glaucoma
Posterior uveitis – proptosis, visual loss
Treatment:
REFER
High dose systemic steroids
Systemic NSAID
Topical cyclosporin
Methotrexate

Scleral grafting

Corneal Ulcer secondary to contact lens

associated Hypopyon
Pseudomonas, Klebsiella
Immediate Ophthalmology referrel
Culture
Atb - Cipro
Cycloplegics
Steroids
Etc..

Chemical Conjunctivitis/ Burn

Alkali Burn = **ABSOLUTE EYE EMERGENCY**
Sodium hydroxide (lye or other alkali e.g. cement, drain cleaner, fertilizer, sparklers, and firecrackers)
Liquefaction necrosis (versus coagulative with acid)
Treatment: Immediate tap water at scene
In ER: Continuous saline irrigation, ophthalmology consult, irrigate ringer's lactate at 500cc's/30 minutes, pH should be between 6.8 – 7.4

Rocky Mountain Spotted Fever

Rickettsia rickettsia
Wood tick
Dog tick
Widespread south central Atlantic coast
Clinical 2–4 ds post bite
Initially non specific
Headache, fever, chills, malaise, nausea, vomiting, anorexia, abdominal pain, photophobia
Rash starts on extremities
Maculopapular rash
Petechial (classic 35-60%)
Begins in extremities wrists and ankles spreads to trunk
Involves palms and soles
GI: Jaundice, hepatomegaly, splenomegaly, acute abdomen
Pulm: cough, SOB, hypoxia
Neuro: confusion, SZ, coma
Renal: pre renal Azotemia ATN
Cardiac: minor EKG changes
"Black Measles
Lone Star tick, the American dog tick, and the deer tick, which can also cause Lyme disease.

Treatment
Early Tx decreases mortality 25% to 50%
Antibiotics
Adults
Doxycycline 100 mg BID x 5-7 days
Children < 8 yo
SAME - Doxycycline
Supportive care

Cat Bite
Staph/ Strep and Pasturella multocida
Augmentin
Doxycycline
Ceftriaxone – moderate
Amp/ Sulbactam – severe
Rabies coverage
Tetanus
Look for Foreign body – tooth

Hordeolum – Stye
Internal
Meibomian gland
Staphylococcus aureus
Treatment
warm compresses
topical and/or oral antibiotics
incision and drainage if needed
external
infected eyelash area
Staphylococcus aureus
Treatment
warm compresses
topical antibiotics possibly PO antibiotics
pull the eyelash to drain
incision and drainage if needed

ophthalmology referral for both

Chalazion

External – blocked meibomian
Localized – inflammatory
Not usually infected
More chronic/ indolent
Topical atb/ PO atb
Warm compresses
Curretage

Pterygium

UV light exposure/dust
Not emergent
Refer

Dacryocystitis

Painful, swollen, red, medial unilateral mass
Lacrimal duct
Staph/ strep
Massage duct
Topical ophthalmic drops
Systemic antibiotics

Dacryoadenitis

Swelling & tenderness temporalupper eyelid
Lacrimal gland
Adults: bacterial
Children: viral (mumps most common cause)
Cool compresses/oral antibiotics

Cellulitis

Skin/ subcutaneous tissue
S. Aureus/ Strep
Rx – PRSP
Consider CA-MRSA

Erysipelas

Group A b-hemolytic strep
More superficial
Sharp Demarcation
Face
Adults, diabetics,
Treatment

PCN G
Macrolides
Cephalosporins

MRSA

Hospital MRSA
- Resistant
- Hospital associated
- Dialysis/ surgery/ catheters
- Instrumentation

CA-MRSA (increasing)
- Community associated
- SSTI/ Pneumonia
- Crowded living
- Sensitive to
  - Doxycycline
  - Bactrim
  - Rifampin
  - Clindamycin

Impetigo

Superficial skin infection
- Vesiculo-pustular, honey crusted "stuck on"
- lymphadenopathy

S. aureus, S. pyogenes, Group A Strep
Some strains can cause glomerulonephritis (rare)
Augmentin, Azithromycin, Erythromycin, Keflex
Mupirocin Topixcal/ Nasal
Gentle scrubbing

Bullous Impetigo

Clinical
- Staph, phage II
- Fragile bulla
- Straw colored fluid
- Genital, perioral, perinasal, extremities
- Children,
- Preceding URI

Treatment
- Mupirocin topical
- Oral anti staph – diclox
- MRSA?

Ecthyma

deeper infection similar to impetigo
Poor nutrition/ hygiene
Alcoholics

Erythrasma

Cornybacterium
Humifity/ hygiene/ diabetes
Coral color under woods lamp
Treatment
    Information
    Hygiene
    alternates cephalosporin or penicillin

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necrotizing fasciitis

involves deep tissues to the fascia
may be gas forming
rapid spread
often aerobic and anaerobic organisms
predisposing factors include diabetes mellitus, malignancy, alcoholism,
etiology-group a streptococcus, staph aureus, Bacteroides, Proteus,
Pseudomonas, Klebsiella, and others

Fourniers gangrene

necrotizing fasciitis in the perineal region
diabetics and immunocompromised patients
rapidly spreading
often requiring broad-based debridement
is often mixed bacteria needing broad-based in about a coverage

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Ocular Preseptal Cellulitis

infection appears to be superficial
child does not appear toxic
eye exam is normal
extraocular movements intact and not painful
infection appears to be limited to the eyelid and surrounding skin only
treatment
- warm compresses
- antibiotics
- very close follow-up

consider strongly CT scan to rule out subtle deep infection llow-up

Orbital Cellulitis

significant ocular and periorbital infection
unilateral proptosis
swelling and erythema of lids and surrounding tissues
this is a deep infection
CT scan to delineate spread
Treatment
- admission to the hospital
- IV antibiotics like Unisys or Cefoxitin
- possible surgical drainage

Uveitis

Signs and symptoms very red eye
Decreased visual acuity,
intraocular pressure decreased
Consensual photophobia

Slit Lamp: Flare and cells in anterior chamber
Treatment:
- Mydriatics and
- Topical steroid
- Cyclopentolate or homatropine (reduction of ciliary spasm and pain

Complications: Posterior synechiae/anterior synechiae-subsequent secondary