

Measles

and Other Fine Rashes

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Why talk about measles?

- Measles is in the news
- Extremely contagious
- If we see a suspected case, we may need to consider options other than transport
- Our communities look to us as experts, and they will seek our advice

Outbreak

- Outbreaks are increasingly common in US
- Outbreaks are no longer just in isolated, self-contained groups (i.e. religious communes)
- 72 confirmed cases in Clark County, WA
- Also Portland and Seattle



And more than just measles

- Measles
- Other interesting or life threatening rashes
- Rash Jeopardy

Measles

- Also known as:
 - Rubeola (not rubella, that's a different virus)
- Red measles
- English measles
- Morbilli



Measles Outbreak

- In Clark County (as of this morning's report)
 - 68 in children (< 18 years)
 - 70 cases in unimmunized or unverified immunity
 - 2 cases had only one MMR vaccine
- CDC recommends 2 MMR vaccinations

Measles Transmission



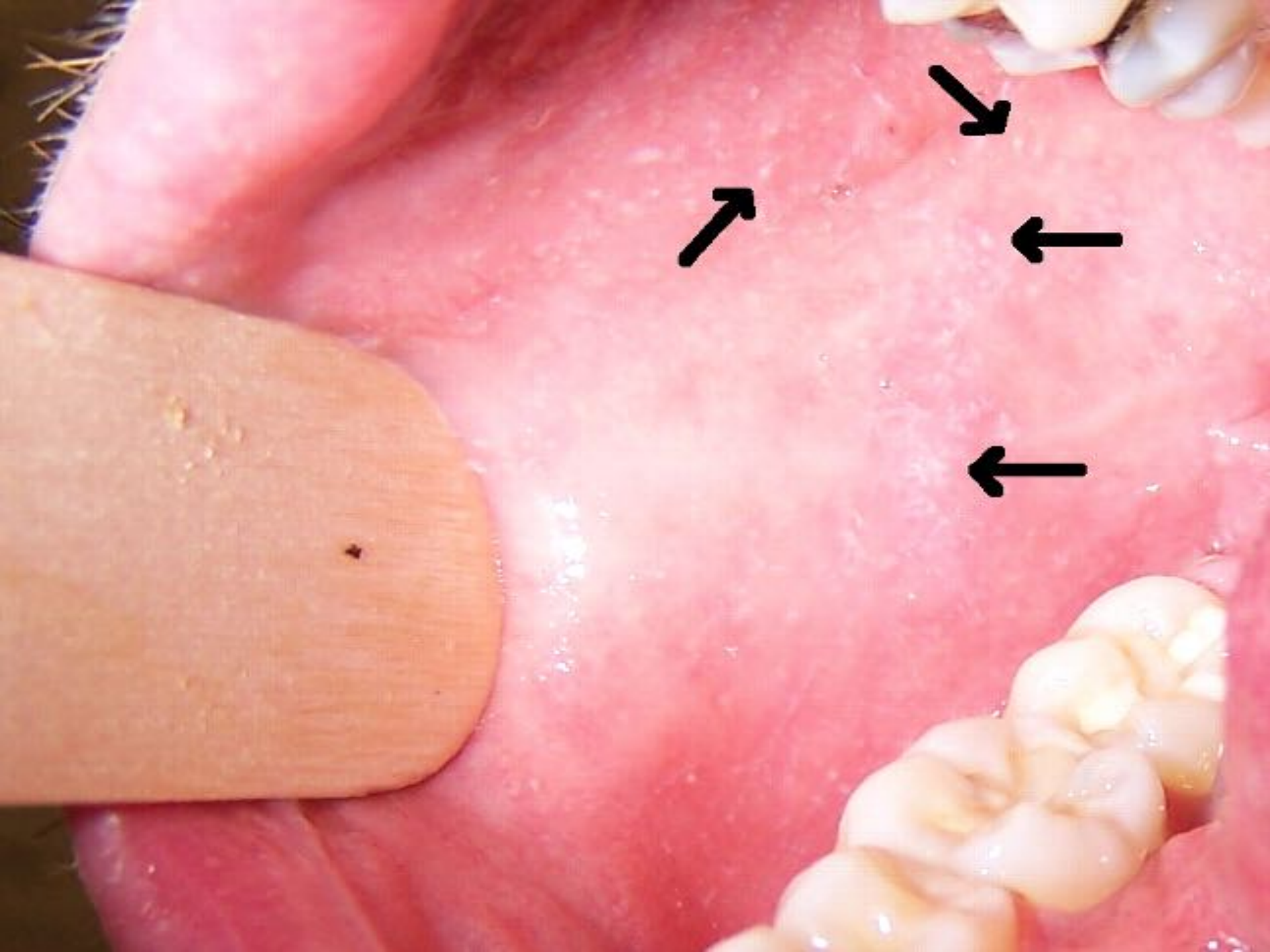
- Extremely contagious
- 90% risk of contracting measles if unimmunized and share living space
- Airborne droplets and contact with secretions
- Patients are contagious throughout course of illness, even before the rash is visible

Measles Symptoms

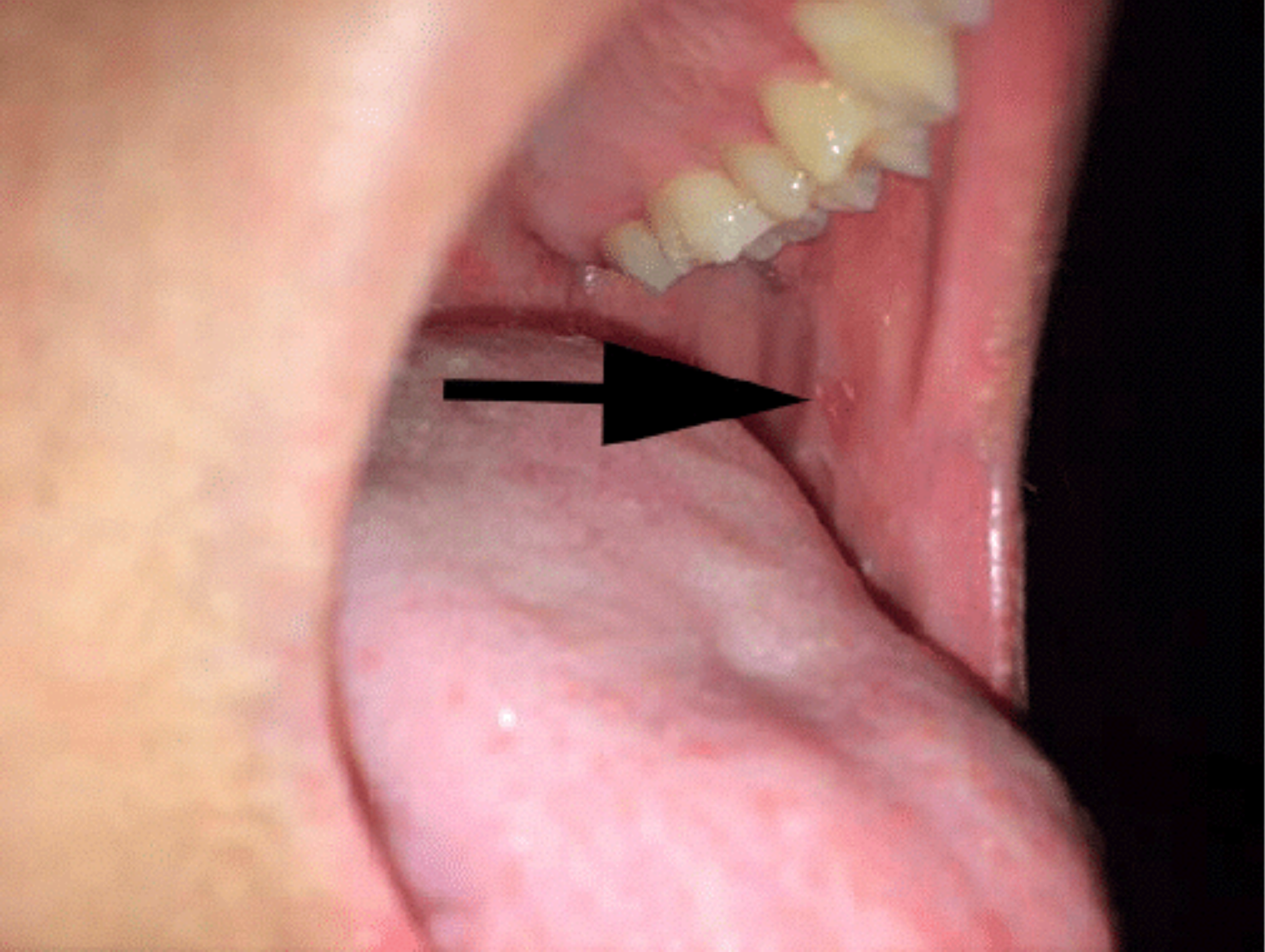
- Cough
- Coryza (URI symptoms)
- Conjunctivitis
- Fevers up to 5 days
- Koplik spots











Clinical Presentation

- Onset 7-21 days after exposure
- URI with conjunctivitis
- Koplik spots on day 2 or 3
- Then develop the rash on days 3-5
- Fever peaks after rash appears





Rash

- Rash starts on face
- Progresses caudally
- Entire illness usually lasts 7-10 days, unless complications extend the course of illness.







Southbound Mom





Clinical Course

- Based on data prior to widespread vaccination (1963)
 - The vast majority recovered without known sequelae
 - 1 in 10 were hospitalized
 - 1 in 20 developed pneumonia
 - 1 in 500 developed encephalitis
 - 1 in 1000 died

Complications

- Highest risk in patients < 5 or > 20 years old
- Overall, 30% of cases have complications
- However, most of these complications are diarrhea, otitis media and pneumonia

Complications

- Pregnancy – low birth weight, prematurity
- Long-term complications
 - SSPE
 - Disability from encephalitis, pneumonia, hospitalization
 - Hearing loss
 - Seizures

Treatments

- None
- Well, supportive care
- No aspirin for kids
- GamaSTAN immune globulin recently approved for post-exposure prophylaxis
- Can give vaccination for post-exposure prophylaxis

Measles Summary

- URI » Koplik spots » rash
- High rate of complications compared to other viral exanthems
- Very contagious
- Vaccination works, adverse events very rare

Many Life Threatening Rashes

- Meningococccemia
- TEN
- Stevens-Johnson
- Toxic Shock syndrome
- Urticaria / Angioedema / Anaphylaxis



Other Interesting Rashes

- Chicken pox
- Shingles
- German measles (rubella)
- Poison ivy / oak / sumac
- Staphylococcal Scalded Skin syndrome



Stretch Break



First Case

- 44 year old with 3 days of an itchy, painful rash on her left torso
- Normal vitals







Shingles

- Reactivation of varicella zoster virus (chicken pox)
- **Dermatomal (can spill over a little)**
- Contagious, virus is in the blisters
- Usually benign, but painful

Shingles

- Postherpetic neuralgia, herpetic keratitis
- Disseminated shingles can be lethal
- Antiviral treatments and neuropathic pain meds
- Vaccine available

Next Case

- 20 year old college student with 12 hours of fevers and URI symptoms
- Also has this rash on her legs
- HR 130, BP 90 / palp, 102 F







Meningococccemia

- *Neisseria meningitidis*
- Sepsis, meningitis
- High mortality, transmission by droplets & secretions
- Vaccine preventable
- Can look like other causes of petechiae, both benign and serious

Next Case

- 18 month old with an small abscess
- Soon after onset of abscess, developed this rash
- Behaving normally, normal vitals, rash doesn't seem to bother him







Staphylococcal Scalded Skin Syndrome

- Widespread blistering, sloughing of skin
- Caused by exotoxins from *S. aureus*
- Supportive care + antibiotics
- Great outcomes in kids, a bit worse in adults

Next Case

- 24 year old female with 36 hours of fevers, rash on hands & feet
- HR 130 bpm, BP 70/palp, 101 F
- Looks toxic







Toxic Shock Syndrome

- Toxins from *S. pyogenes* or *S. aureus*
- Fever, rash, hypotension; critically ill
- **Desquamation of palms and soles**
- IV antibiotics, IV fluids, IVIG, debridement
- High mortality, strep >> staph

Next Case

- 30 year old with 24 hours of very itchy rash
- Onset soon after hiking
- Normal vitals







Poison Ivy

- Western poison ivy and Pacific poison oak in WA
- Urushiol usually causes local reaction, but anaphylaxis possible
- Wash/rinse, steroids, antihistamines



Next Case

- 5 year old with 4 days of URI symptoms, fevers, and now with this rash
- Has lymphadenopathy on exam
- Does not appear toxic
- Vitals normal except temp 101 F







Rubella

- German measles, 3 day measles
- Similar to rubeola, but milder and shorter
- Lymphadenopathy, orchitis, **Forchheimer's spots**
- Good outcomes except for congenital rubella
- No treatment, but vaccine works

Next Case

- 44 year old male in walk-in clinic with “allergic reaction”
- Skin sloughing, oral lesions with swelling
- 90/palp, HR 110, other vitals normal







Stevens-Johnson / TEN

- SJS and TEN different spectrum of same disease
- Autoimmune reaction to medication or infection
- Treatment is controversial
- Remove offending agent, treat in burn center

Next Case

- 39 year old male with 4 days of fevers, myalgias, malaise, headache and vomiting
- Then develops this rash







Rocky Mountain Spotted Fever

- Spread by tick bites, usually summer time
- Uncommon, < 5,000 / year in US
- Fever, headache, **centripetal rash**
- 1 in 8 die without treatment, 1 in 200 with doxycycline

Last Case

- 2 year old with URI symptoms, cough, fevers, and now this rash
- Happy, playful, doesn't look sick
- Normal vitals







Chicken Pox

- URI symptoms, fevers, then rash
- **Vesicles in different stages at the same time**
- Vaccine available; use antivirals if high risk



