Strangles \((Streptococcus\ equi)\)

**Classic case:** Young horse, nasal discharge, swelling under jaw, head extended

**Presentation:**
- Usually **young horses** or any previously unexposed horse
- Fever, depression
- **Nasal discharge**
- Head and neck extended, pharyngitis, dysphagia, coughing is rare
- **Lymphadenopathy** – esp submandibular or retropharyngeal
  - Image of lymphadenopathy
  - Image of ruptured submandibular abscess

**DDX:**
- **Nasal discharge** – HSV-1, HSV-IV, influenza, rhinovirus, adenovirus, reovirus, pharyngeal lymphoid hyperplasia, bacteria pneumonia/pleuropneumonia, guttural pouch disease, nasal passage/sinus infection, cyst, polyp, tumor; allergic airway disease
- **Lymphadenopathy** – lymphoma, myeloma, Glanders, tuberculosis, sporadic lymphadenitis, *Corynebacterium pseudotuberculosis* (pigeon fever)

**Test(s) of choice:**
- Bacterial culture of nasal discharge or lymph node aspirate/drainage
- ELISA useful to detect exposure, vaccine response, possible infection
- PCR identifies DNA,
  - Used to identify carriers and
  - Determine if guttural pouch infection/carry state has been eliminated

**Rx of choice:**
- Symptomatic therapy
  - NSAIDs, hot packing, soft food
  - Mature abscesses – lance, drain, lavage
- Isolate affected animals

**Antibiotic Rx CONTROVERSIAL**
“Most authors agree that initiation of antibiotic therapy after abscess formation may provide temporary clinical improvement in fever and depression, but it ultimately prolongs the course of disease by delaying maturation of abscesses.

*Antibiotic therapy is indicated in cases with dyspnea, dysphagia, prolonged high fever, and severe lethargy/anorexia.***

- ABX prevent development of abscesses if started immediately
- ABX prevent development of immunity (treated horses still susceptible)
- If abscess present, duration of disease will be **prolonged**
- Complicated cases (extreme dysphagia, airway compromise) use **IV penicillin**
- Tracheostomy may be indicated in severe cases
- Surgery may be necessary to remove chondroids from guttural pouch
Strangles (\textit{Streptococcus equi})

Extended Version

Prognosis:
- Excellent for routine cases
- Guarded for those with complications
- Outbreaks in large groups will often have a few with serious complications and some deaths

Prevention:
- **ISOLATE** all affected horses AND **QUARANTINE** the farm
- **Check temperature twice daily on all horses**
  - Fever develops 2-3 days prior to shedding
  - Isolate febrile horses
- Vaccinate **ONLY** horses with NO exposure to affected patients
- Most cases shed for 2-3 weeks
- **Carrier State**
  - Short term – up to 6 weeks
  - Long term – few months to years (often due to persistent guttural pouch infection)
    - To confirm elimination
    - Three negative cultures of guttural pouch or nasopharyngeal washes required

Pearls:
- Bacterial upper respiratory disease caused by \textit{Streptococcus equi}
- **Bastard strangles** – abscessation of internal lymph nodes or organs
  - lungs, liver, spleen, mesentery, kidney, brain
- **Purpura hemorrhagica** – immune-mediated vasculitis to \textit{S. equi} antigen
  - Occurs after infection
  - or vaccination
  - Image of purpura hemorrhagica
- Transmission –
  - Direct via discharges;
  - Indirect via shared housing, water, equipment, caretakers, vets, farriers, etc
- **Reportable** in some states (Georgia), but not others – VERY contagious