Zuku Review FlashNotes™

Scrapie

Condensed version

**Presentation:**
- Adult sheep, black-faced breeds in US – 96% of cases
- Many breeds elsewhere; Rare, but is seen in goats
- Usually > 2 years of age, incubation 2-5 years
- Death w/in weeks to months once C/S present

Clinical signs *vary:*
- Weight loss w/ normal appetite & *progressive neurologic* signs
- Head tremors, ataxia, incoordination, lip-smacking
- Abnormal gaits– bunny-hopping, prancing, nibble at legs, and air
- Behavior changes, separate from flock, trembling, hyperexcitable
- **Intense pruritis (70%);** Wool loss from rubbing, hypersensitivity

**Test of choice:** Must detect prion proteins in tissue
- Histopathology - vacuoles, plaques
- **Immunohistochemistry (IHC) = gold std**
  - Brain tissue, most often the OBEX
  - Cerebellum for ‘atypical’ Scrapie
- Western Blot when tissues are autolyzed
- ELISA used for screening – Brain, lymph tissues
- **Biopsy lymphoid tissue inside 3rd eyelid – IHC**
- Biopsy of tonsils – used in Europe – IHC or ELISA

**Treatment:** None; Euthanasia  
**Prognosis:** Grave, always fatal disease

**Prevention:** *Take GREAT care - handling or transporting tissues*
- Breed only genetically resistant sheep
- Do not feed ruminant proteins to ruminants
- Maintain closed herds; Euthanize positive sheep
- Follow Eradicate Scrapie guidelines & US Mandatory Scrapie Eradication Program
- Carcasses – Incineration/alkaline digestion

**Pearls:** Scrapie is a transmissible spongiform encephalopathy (TSE) - a *reportable* disease
- TSEs are caused by prion proteins (PrPsc )
- Mis-folded versions of *normal* cellular proteins - Not ‘foreign’ - *no immune response*

---

**Zuku Review FlashNotes™**

**Classic Question(s)**

What are the clinical signs of Scrapie?

How is Scrapie prevented?

How is Scrapie transmitted?

What tissue(s) should be submitted for diagnosis of Scrapie? What antemortem tests are used?

What test(s) is/are used for screening or confirmation of infection?