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Overview

Talk 1

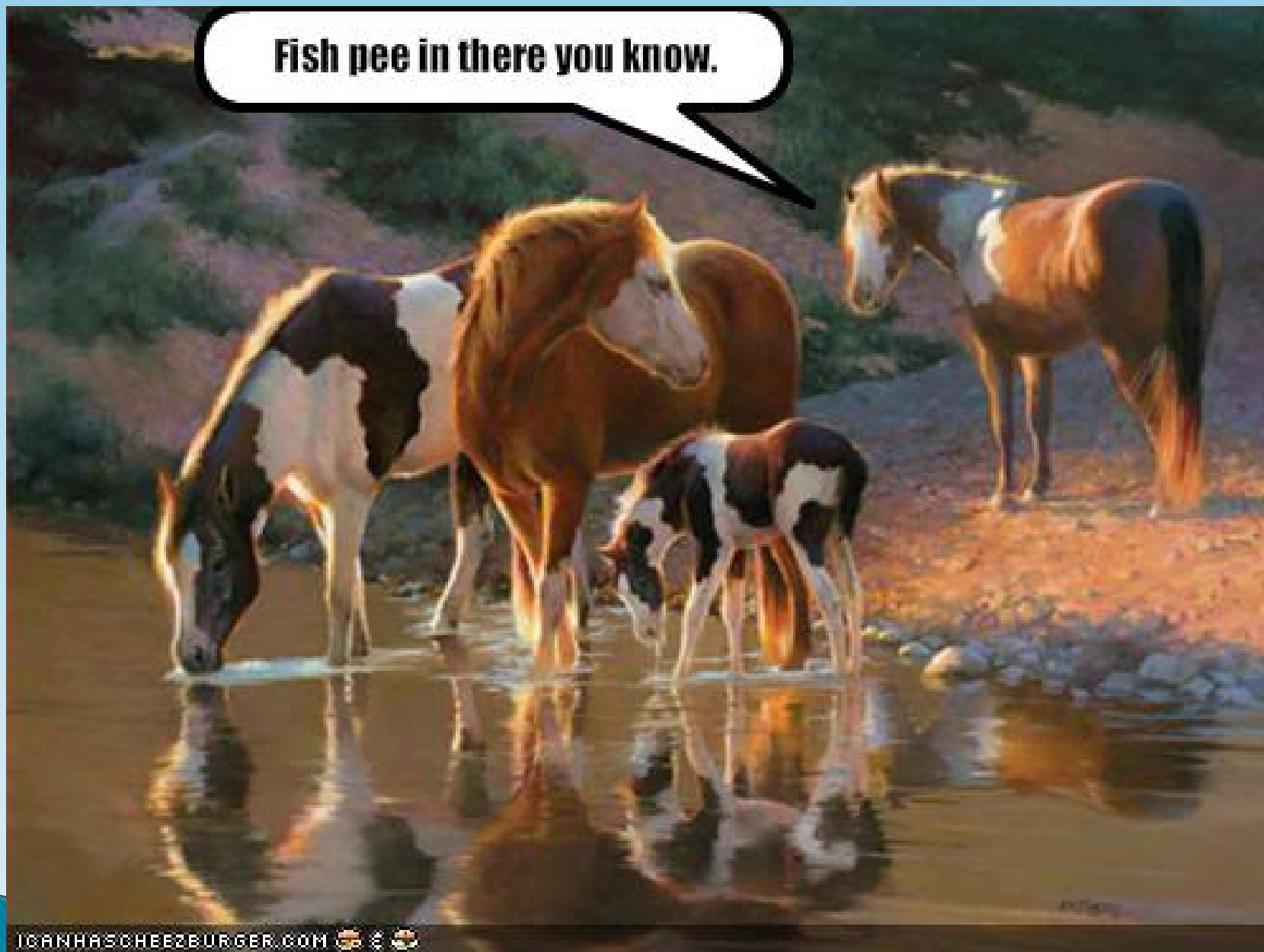
- The Bacteria
- How is infection transmitted?
- What does it do to my horse?
- What should I look out for?
- Treatment

Talk 2.

- Preventing disease spread.
- Managing outbreaks of disease on yards.



Fish pee in there you know.



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Strangles

What you need to know

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Strangles – The Disease

- ▶ Ranked amongst the three most significant respiratory infections in the world
- ▶ Evolved to coexist with horses
- ▶ A highly contagious disease
- ▶ The most commonly diagnosed bacterial disease in horses
 - UK estimates 200–400 outbreaks / year
 - Sweden ratio of strangles:flu between 4:1 and 5:1
- ▶ In southern Scotland high number of asymptomatic (silent) carriers so higher risk of exposure?

Strangles – The Disease

- ▶ Unique to the horse family
- ▶ Seen in horses of all ages
- ▶ Horses ill for 7–21 days but can remain infectious for 1–2 months.
- ▶ Major economic loss to the equine industry and very disruptive to yards and owners

The Bacteria

- ▶ *Streptococcus equi* subsp *equi*
- ▶ Requires an equine host to survive
- ▶ Can remain in the environment for up to 2 months following an outbreak
- ▶ Killed by normal disinfectants/soaps



How is infection transmitted?

▶ Direct

- Horse to horse contact

▶ Indirect

- Feed and water buckets
- Haynets
- People
- Tack/ headcollars



- Can take 1–14 days for clinical signs to develop after infection, however some strains can be as long as 21 d.
- Horses can be infectious prior to clinical signs so hygiene is very important!

What does it do to my horse?

- ▶ Colonises in the upper respiratory tract
 - Cough
 - Fever
 - Lethargy
 - Anorexia
 - Nasal discharge
- ▶ Crosses epithelium to reach lymph nodes
 - Enlarged lymph nodes
 - Can survive within white blood cells, so avoids normal immune response.
 - Secretes a number of products which can damage tissue, kill cells, and cause an inappropriate immune reaction.

Strangles – Clinical Picture

- Horse becomes infected
- Infection in the lymph glands
- Lymph glands become very swollen
- Lymph glands rupture
- Disease passes to next horse



What should you look out for/ clinical signs

- ▶ Fever
- ▶ Lethargy
- ▶ Nasal discharge
- ▶ Depression
- ▶ Anorexia
- ▶ Swollen lymph nodes
- ▶ Some horses show no signs at all.

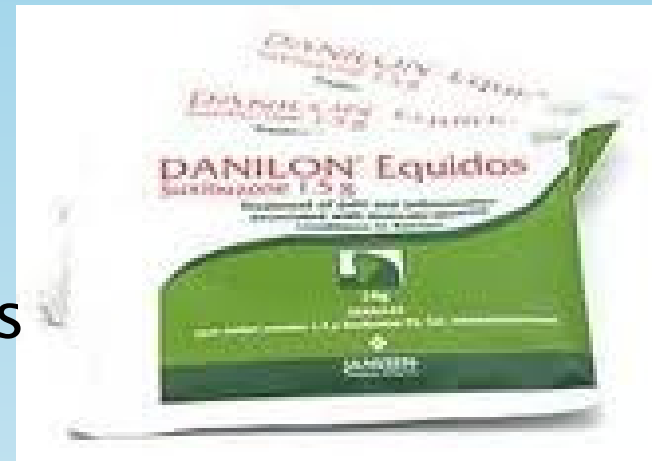


Clinical syndromes

- ▶ Typical strangles
- ▶ Atypical strangles
 - More flu like
- ▶ Bastard Strangles
 - Up to 10%
 - Systemic abscesses
- ▶ Purpura haemorrhagica
 - Damage to blood vessels
 - Serious but rare disease
- ▶ Carriers (10–15% of INFECTED horses).

Treatment

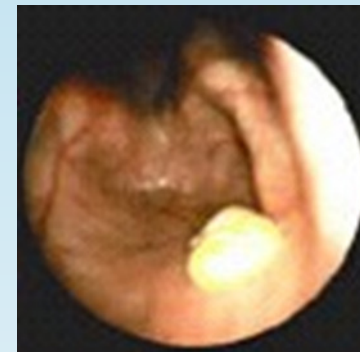
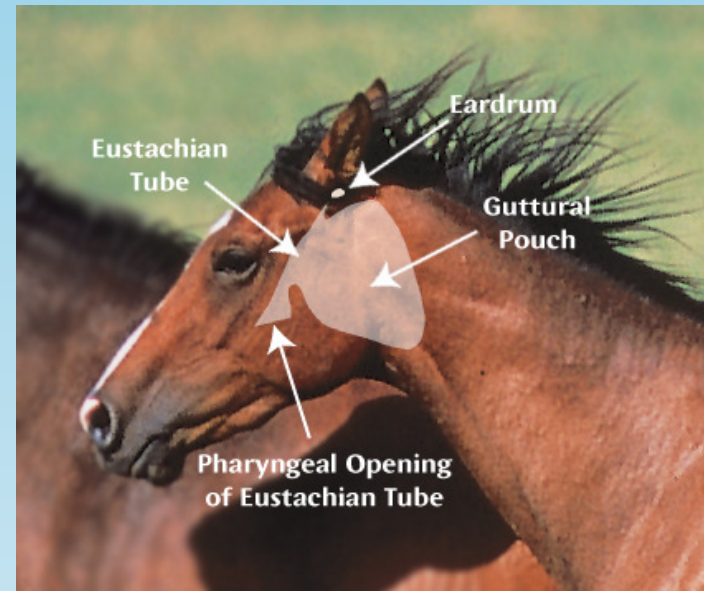
- ▶ Antibiotics
 - Possible use
 - Usually penicillin
 - Depends on individual situations
- ▶ Hot compresses
- ▶ Lancing and irrigation of abscesses
- ▶ Supportive care
- ▶ Encourage horses to eat from the floor if possible
- Anti-inflammatory (Danilon)
 - Reduce fever
 - Improve cough
 - Aids natural immune response



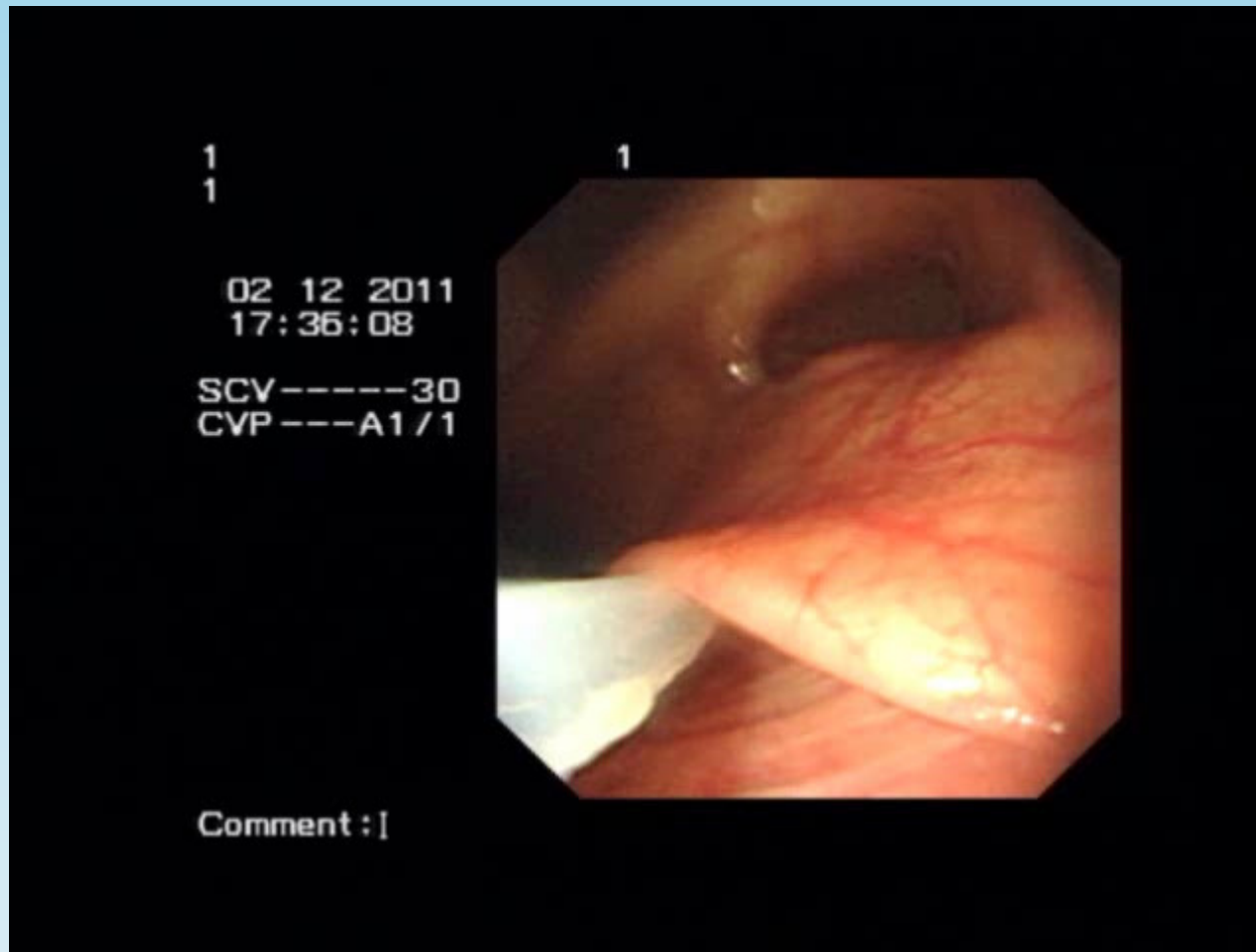
Strangles: Carriers

► Carriers

- Around 10% of horses
- Guttural pouch chondroids harbour infection
- No external signs
- Intermittently shed bacteria for months
- Source of infection to others
- Difficult to diagnose



Guttural Pouch Endoscopy



Post outbreak screening.

- ▶ All infected cases will be examined by endoscope to establish if;
 - the infection has cleared
 - if any animals have become chronic carriers
- ▶ To be confirmed negative;
 - 3 clear nasal swabs should be taken 1 week apart
 - 1 negative guttural pouch wash

Cost of an outbreak

- ▶ This will impact you economically
 - Vet Fees
 - Range depends on involvement and level of testing
£300 +
 - Inconvenience of management
 - Riding school income
 - Loss of show season
 - Loss of liveries due to shut down
 - Inconvenience of managing outbreak
 - Isolation time consuming
 - Welfare cost to affected horses

Vaccination Programme

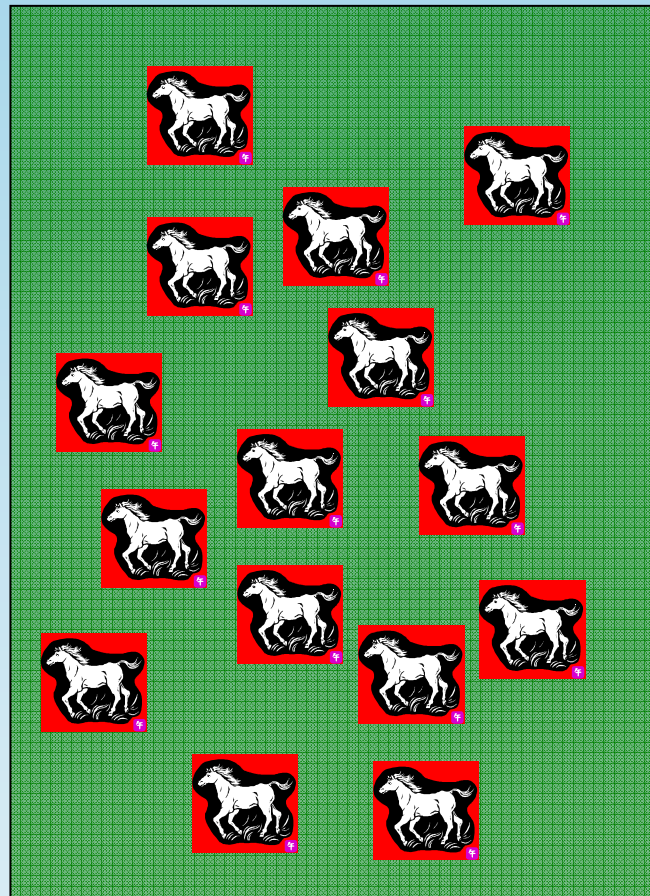
- ▶ A horse's vaccination programme should be based on risk and economic consequences
 - In general the more a horse is in contact with other horses the greater its risk of contracting strangles
- ▶ All horses on a yard should be vaccinated using the same regime

Herd Immunity

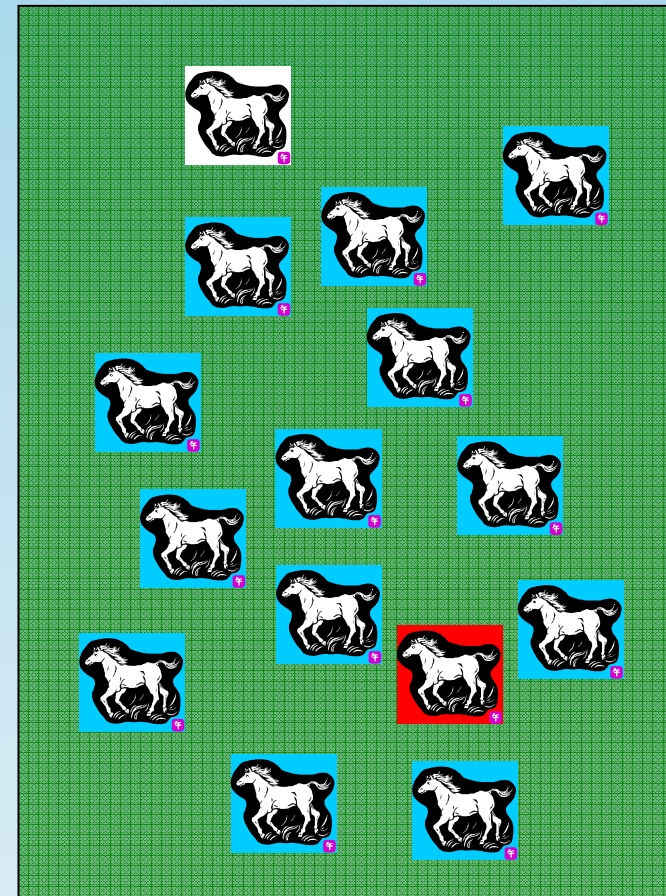
- ▶ Vaccination never 100%
 - Individual variation
 - Overwhelming challenge
- ▶ Protect group
- ▶ Vaccinate all horses



Herd Immunity Effect



Non-vaccinated herd



Vaccinated herd (one non-responder)

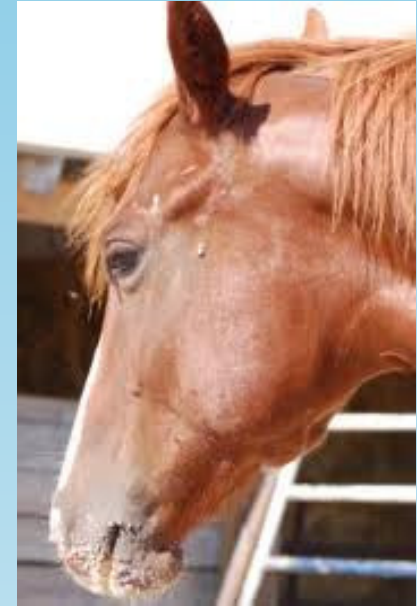
Vaccination Schedule

- ▶ Basic vaccination schedule
 - 2 injections 4 weeks apart
- ▶ Boosters at 3 or 6 months depending on level of protection required



Summary

- ▶ Strangles is caused by a bacterial infection
- ▶ Usually only causes mild respiratory disease that does not require aggressive treatment.
- ▶ Highly infectious but can be controlled through correct management procedures.
- ▶ The bacteria is easily killed by most disinfectants and soaps.
- ▶ Can be prevented by bio-security and vaccination.



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