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Background

- Equine fairs are the congregations of equine for trading purpose

- There are 70 equine fairs in India
  - More nos. of equine fairs are found in northern India
  - Equine ranges from 4000-18000/fair

- Last year FY 2012-13
  - Brooke India attended 45 fairs
  - 3175 cases were attended
  - Colic remains most prevalent followed by, accidental injury, lameness and protozoal diseases

- 74 protozoal cases were found
  - 50% were Surra cases
Cont.
Introduction

- **Trypanosoma evansi** is the causal agent of Surra.
- It can infect most mammals, although horses and camels are the principal hosts (Mahmud et al 1980).
- A high percentage (12.74%) of horses were found suffering from *T evansi* infection (Laha and Sasmal, 2008).
- A Survey of Veterinary Practitioners showed, 45% of prevalence of Surra (B.R. Singh et al 2010) in India.
- Several haematophagous flies, including Tabanids and *Stomoxys*, acting as mechanical vectors.
Cont..

• Draught animals are prone to Surra (FAO)

• There is a direct correlation between incidence of surra and population of tabanid flies (Soodan et al. 1995)

• Buffaloes act as reservoir host
Sign and symptoms

- **Mild to moderate case**
  - Irregular fever
  - Progressive weight loss
  - Anemia
  - Edema of dependent part and enlargement of the lymph nodes
  - Petechial hemorrhage

- **Severe case**
  - Neurological signs - Ataxia, head tilt, circling.
  - Gradually progressive paresis of the hindquarters.
Diagnosis

• Based on clinical signs and symptoms
• Field laboratory tests
  – Direct microscopy of blood
    • Wet blood films
    • Thin blood smears (Leishman’s stain)
  – Estimation of haemoglobin (Sahli’s method)
Results

• A total of 16 cases were suspected for Surra out of 130 cases
  – 8 equines were found +ve for Surra
    ○ 6 horses and 2 mules

• Mean haemoglobin was 6.0 g% (3.4-8 g%)

• Mean age of positive animals was 5 years (3-8 years)

• Clinical signs were fever, pale and anaemic mucous membranes

• All (8) of the Surra +ve animals were treated with quinapyramine sulphate

• All cases recovered
  – no relapses were reported within three months.
Discussion

• All the cases were recorded post-monsoon season which concurs with reported seasonal patterns

• Over-crowding during travel may heighten stress making equids more susceptible to Surra

• Diagnosis of Surra at field is challenging

• No other reports detailing age and sex as risk factors for Surra have been found

• Direct microscopy limited value in diagnosis of sub-acute or chronic cases

• 34.6% of the animals studied in Kerala, India, were found to be carriers for *T. evansi*, but the blood smear examination failed to detect 150 samples (Nair, A.S. 2011)
Conclusion

- Presenting signs of pale, anaemic mucous membranes in conjunction with field-based clinical pathology tests can contribute to identifying acute cases of *T.evansi* in equids.

- There is need for further studies to investigate ways to improve sensitivity of field lab tests.

- Early diagnosis and treatment is the most important factor for saving life.
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References


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