

Neonatal piroplasmosis, an underestimated problem?



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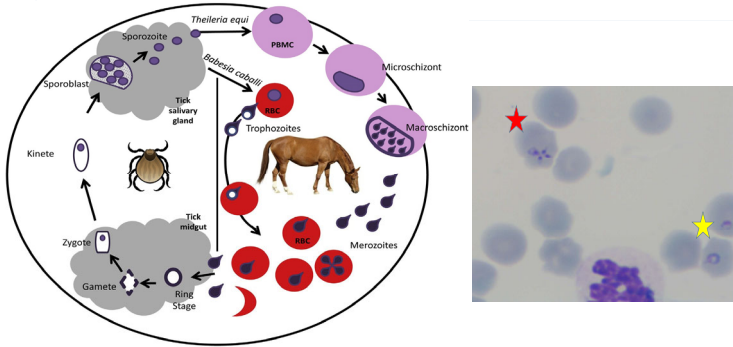
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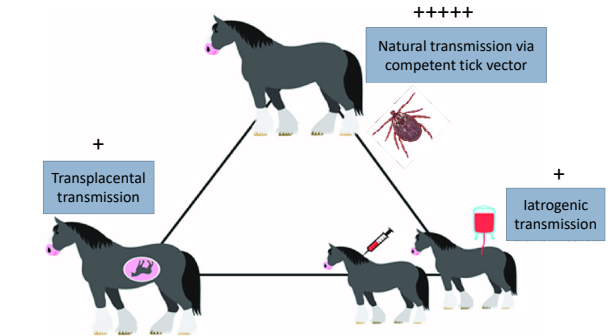
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INTRODUCTION

- Piroplasmosis = tick-borne disease
- Etiology: *Theileria equi* and *Babesia caballi*



Lifecycle (Wise *et al.*, 2014) and morphology of *T. equi* et *B. caballi* on blood smear
Yellow star: *B. caballi*, red star: *T. equi* (Eve Ramery – Vetagro Sup)



Transmission routes of *T. equi* and *B. caballi* (modified from Onyiche *et al.*, 2019)

Clinical piroplasmosis in equine neonates is rare. Transplacental transmission has been described with different clinical presentations

OBJECTIVES

- Estimate the frequency of vertical transmission of piroplasmosis etiological agents from infected asymptomatic broodmares to their foals
- Observe the symptoms in positive newborns

MATERIALS

- Inclusions mares: spending > than 6 months/year on pasture, in last trimester of gestation
- Inclusions foals: < than 72 hours of age, born in a box/paddock.

METHODS

- Blood smear evaluation
- Nested PCR
 - Foals from carrier mares → triplicate
 - IFAT in PCR positive foals

RESULTS

- 71 mares and their foals, without clinical signs of piroplasmosis

Nested PCR	<i>T. equi</i>	<i>B. caballi</i>
Mares	25/71 (35,2%)	2/71 (2,8%)
Foals	2/25 (8%)	0/2 (0%)

Blood smear	<i>T. equi</i>	<i>B. caballi</i>
Mares	5/25 (20%)	0/2 (0%)
Foals	2/2 (100%)	0 (0%)

- Positive serology in PCR positive foals: 1/1280

CONCLUSION AND CLINICAL RELEVANCE

- Confirmation of *T. equi* vertical transmission
 - Low transmission rate (8%)
 - No clinical signs of neonatal piroplasmosis
 - Vertical transmission may be of importance for breeders
- No confirmation of vertical transmission *B. caballi*
 - warrants more research

• No conflicts of interest to declare.

• The Animal Research Ethics Committee approved the study protocol (N-2211). Consent was given by owners or their representatives for the inclusion of their horse in the clinical trial.

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