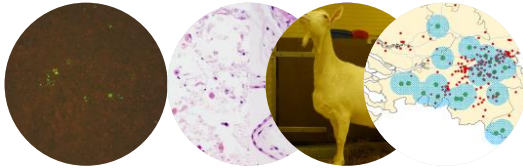


Experimental Q fever infections in pregnant goats: pathogenesis and excretion

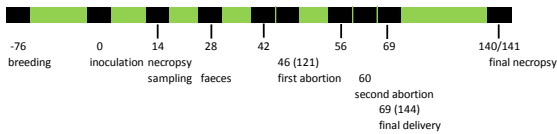
7 June 2012

Q fever symposium, Amsterdam

H.J. Roest, E. van Gelderen, A. Dinkla, D. Frangoulidis, F.G. v Zijderveld, J.M.J. Rebel, L.J. van Keulen



Experimental set up



- Dutch outbreak strain was used
- Intranasal inoculation
- Internal organs tested by IHC and PCR
- Faeces tested by PCR



Aim

Connecting excretion of *Coxiella burnetii* to pathogenesis in pregnant goats after intranasal inoculation

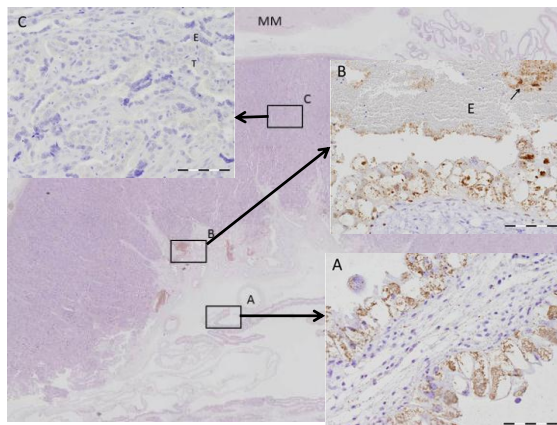
- 1) do pregnant infected goats excrete Coxiella before abortion/delivery?
- 2) how can the faecal shedding be explained?
- 3) where does *C. burnetii* harbour in the goat after infection.



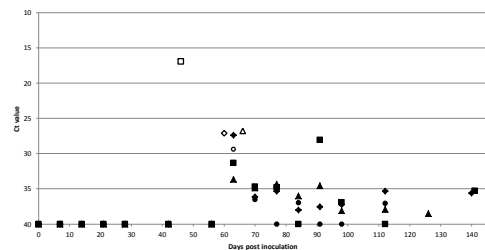
Results

Parturition

- 3 goats aborted
 - 2 goats 1 weak born kid
 - 2 goats health kids
- 4 goats delivered live born kids
 - 2 goats 1 weak born kid
 - 2 goats health kids
- No differences in *C. burnetii* load in placenta's



Results, faecal excretion



Results of pathogenesis

- *C. burnetii* reaches the trophoblast cells of the placenta in 28 dpi
- Increase in number of organs positive for *C. burnetii* DNA towards parturition
- Decrease of positivity after parturition
- 81 days post parturition no DNA of *C. burnetii* detected in the organs
 - Only in the mucosa of the nostrils

discussion

- *C. burnetii* is excreted in the faeces but no indications for replication of *C. burnetii* in the gut
 - Where does that come from?
 - From the environment?
 - From inside the goat?
- Harboring of *C. burnetii* in the body
 - No indications for that
 - Detection limit of the PCR
 - Mucosa of the nostrils

Conclusions

- Dutch outbreak strain causes comparable pathogenesis as published earlier
- Also with live-born kids *C. burnetii* is excreted in the placenta
- No indication for replication of *C. burnetii* in the gut
 - Explanation for faecal shedding?
- No indications for harbouring of *C. burnetii* after parturition

