

BLUETONGUE - EUROPE (29): BTV-8, TRANSMISSION ROUTES

A ProMED-mail post

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The EPIZONE symposium titled "Bluetongue in Europe, back to the future!!" was held in Brescia, Italy on 7 Jun 2008. In the abstract book there are 4 studies dealing with the transplacental transmission of BTV. These are:

1. Oral presentation: Fraser Menzies et al: Transplacental and contact transmission of bluetongue virus from an outbreak in a cattle herd in Northern Ireland. p. 36.

The abstract includes the statement: "...circumstantial evidence is presented to indicate contact spread of the bluetongue virus with oral transmission by ingestion of infected placenta being the most probable route of infection".

2. Oral presentation: Anoenk Backx et al: Evidence for transplacental and oral transmission of wild type bluetongue virus serotype 8 after experimental infection in cattle: are unusual routes of virus transmission involved in overwintering? p. 48.

The abstract includes the statement: "Transplacental and oral transmission of BTV are rare, and will be of minor or no importance during periods of vector activity. However, incidental successful transmission of BTV via these routes could lengthen the presence of viraemic animals during the winter period without vector activity, and consequently could be of major importance for the overwintering of BTV."

3. Poster presentation: Peter Mertens et al: Movement of bluetongue virus strains during the disease outbreak caused by BTV-8 in northern Europe during 2006-2008 as revealed by sequence analysis of genome segment 2." p. 65.

The poster includes the statement: "During January 2008 (in the vector-free season) 8 BTV-seropositive but PCR (polymerase chain reaction) negative animals were imported into Northern Ireland (which was BTV free) from the Netherlands. Although these animals were also PCR-negative for BTV at 12 and 42 days post-importation, 3 of their calves were shown to be infected with BTV-8 soon after they were born (by real time Rt-PCR and virus isolation) indicating vertical transmission. The infection was also passed to 2 previously seronegative and PCR negative animals (one from the Netherlands and one from Scotland) that had been housed in the same building, indicating horizontal transmission, in the absence of the adult vector insects."

4. Poster presentation: Linda van Wuijkhuise-Sjouke et al: Vertical transmission of wild type bluetongue virus serotype 8 after natural infection in cattle: are unusual routes of virus transmission involved in overwintering? p. 77.

The poster includes the following statement: "The majority of calves from infected cows were negative... 13 calves were seropositive, most likely by uptake of colostrum from infected cows... Apparently, the northern European variant of BTV-8 can spread vertically resulting in viraemic calves in spring. This phenomenon could lengthen the presence of viraemic animals during the winter period without vector activity, and consequently could be of major importance for the overwintering of BTV."