

Impressive PI production capacity of BVD virus: more than 20% of PIs in an outbreak in a herd with 170 dairy cows in milk

Margarita García Liñeira

Veterinarian AD SG Terras do Queixo, Galicia, Spain

“I have a lot of doubts about what happened on this farm: a BVD clinical picture that I have never seen in my vast professional experience with BVD, in which PI outbreak occurs usually in a short period of time and just few PI animals are detected.”

Background

Dairy intensive farm with 170 milking cows. New modern buildings, young and educated owners, with clear distribution of responsibilities.

Two separated buildings: the Rearing shed for calves >2m up to 1y old. The reproductive herd for inseminated and pregnant heifers, the producing herd and suckling calves.

Preliminary Indication

July 2015 a clinical outbreak in young animals with diarrhea, pneumonia and deaths. Animals were vaccinated against Syncytial, Parainfluenza and Pasteurella. Necropsies were performed with no relevant lesions being observed. Five animals tested for BVD-Ab-P80 and all of them negative.

September 2015 the herd had to be routinely analyzed for several diseases and more than 30% of animals were BVD-P80-Ab positive, demonstrating a clear BVD circulation in the herd.

We tested to detect PIs, with no PI found among animals >6m old confirming no PI animal at the rearing shed and one younger PI was found (a male calf <2m old). Farmers removed it immediately.

Further Development

Analyses of all born females for BVD-Ag were performed. Males were isolated from the farm and removed immediately. In December, two PI calves more were detected and culled and afterward more and more PI animals were detected. At the end, after 6 months, a total of 20 PIs were diagnosed. Relevant: only females were tested! Hence, epidemiologically, the virus was able to produce more than 20% of PIs in this herd!.

Treatment Applied

Observing such a high rate of PIs, almost the half of the analyses were reconfirmed 20d later on the animals, and no single sample was a false positive.

Result

To date (2016), the herd remains controlling new PIs with a decreasing incidence of PI animals by now. No vaccination is applied.

Questions

Q1: Why was the incidence of PI so alarming in this BVD-Case report?

1. Because it was over the usual 20% of PI production in BVD outbreaks.
2. Because it was much over the usual 1-3% of PI production in BVD outbreaks.
3. Because the PIs were extremely ill.

Q2: Why was this BVD virus strain so different?

1. Due to an extremely high capacity to produce transplacental congenital infections.
2. Due to an extremely high capacity to produce abortions.
3. Due to an extremely high capacity to produce pneumonia.

