

CASE REPORT: TRACE MINERAL DEFICIENCY WITH CONCURRENT DETECTION OF *TRYPANOSOMA THEILERI* IN A SUCKLER COW HERD IN GERMANY

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Grazing cattle have different trace mineral requirements than dairy cattle and deficiencies leading to weakness and low production are described for many regions of the world. Three recumbent suckler cows from one farm were presented within two weeks. All of them were kachectic, unable to rise and showed variable mineral and trace mineral deficiencies. Cows were treated with an intensive downer cow-care-protocol and parenteral fluid and electrolyte therapy, mineral substitution, NSAIDs and antibiotics. In one cow *Trypanosoma theileri* was detected in blood smears. Two cases were poorly responsive to treatment and were euthanised after 8 and 22 days of treatment. One case was in a detrimental condition on arrival and died within one day. Postmortem examination of each case resulted in the common diagnoses of muscular dystrophy in the hindlimbs, kachexia and scleral edema. Liver copper content, measured in one animal, was extremely low. A diagnostic follow up herd visit was performed. The farmer fed no concentrate until just before the first farm visit. A mineral mixture was offered *ad libitum* on pasture with variable acceptance by the animals. The cows were very uneven in body condition, had a rough hair coat. In a selection of animals, serum selenium and copper values were analysed and were below reference. All other tested minerals and electrolytes were in the reference range. *Trypanosoma theileri* was detected using PCR in 10 out of 27 cases. In a second farm visit liver biopsies of 9 cows were taken and copper content in dry matter was below reference. Ration analysis was performed and farmer was advised to adjust feeding regime. This case reports documents the importance of surveillance of the mineral status in suckler cow herds, especially when forage quality is low. The significance of the detection of *Trypanosoma* sp. is so far not known, as there are no data available for the occurrence and distribution of this parasite in suckler cow herds in Germany.

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