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AS LONG AS THEY LOOK GOOD ON THEIR FEET

Musculoskeletal disorders in Dutch dairy goat farming

Musculoskeletal disorders in Dutch dairy goat farming presented according to age mainly consist of congenital abnormalities, nutritional imbalances, and (infectious) arthritis. Congenital abnormalities, consist of overextension of the stifle and hock, contracted flexor tendons of the forelimbs, angular limb deformities and arthrogyrosis, patella luxation, and spastic paresis. Nutritional causes are calcium, phosphorus and vitamin D deficiency or imbalance, angular limb deformities, rickets, osteodystrophia fibrosa, white muscle disease, selenium toxicity, and copper deficiency. The focus of this presentation was on spastic paresis and nutritional imbalances resulting in a rickets-like bone disease whereas (infectious poly-)arthritis is not further discussed.

Progressive bilateral (spastic) pelvic limb paresis, ataxia posterior combined with reduced perineal muscle tone was recently observed as a reoccurring abnormality in a number of Dutch dairy goats herds (11). Blood chemistry did not indicate metabolic or nutritional abnormalities. Two extensively studied case goats showed clinical signs of upper motor neuron (UMN), and lower motor neuron (LMN) disease as well as peripheral nerve injury. Qualitative Needle Electromyography (QEMG), showed increased amplitude which could indicate reinnervation resulting from neuropathy. Post mortem examination revealed degeneration of a single solitary muscle fibre in the semimembranosus muscle, as well as some perivascular infiltrate in the spinal cord and cerebrum in one animal. Unfortunately, the etiology of this syndrome is still unknown.

Another reoccurring disorder is a rickets-like bone disease in young dairy goats kids. Clinical features, which consisted of bended (front)legs and a stiff posture and gate, were perceived from the age of 14 to 21 days onwards. A cohort of 235 kids on a farm with a 10-15% occurrence were followed for a month. Calcium, inorganic phosphate and 25-hydroxyvitamin D₃ were determined. Furthermore, three goat kids selected for pathological examination showed several bone deformations, which were most probably related to a rickets-like bone disease. The prevalence of clinically diseased kids was not significantly influenced by a vitamin D3 treatment of does, or the parity of mothers nor bucks. Type of milk powder came up as a risk factor (p=0,002). Possibly the amount of manganese and copper was of influence.

In an expanding thriving industry, with limited highly valued young stock availability, losses due to developmental musculoskeletal disorders can be felt even harder. Although most of the lightly affected kids recuperated, the heavily affected ones had to be relinquished.