FEEDING DEFICIENCY, HYPOVITAMINOSIS AND CALVES VITAMIN DEFICIENCY

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Аннотация:
В статье представлены научные выводы, основанные на результатах исследований ученых мира о причинах гиповитаминоза А у телят, механизме развития, методах лечения и профилактики..

Summary:
The article presents scientific conclusions based on the results of research by world scientists on the causes of hypovitaminosis A in calves, the mechanism of development, methods of treatment and prevention.

Key words: Metabolism, hypovitaminosis A, carotenes a-, b- and g, retinol, vitamins A1, A2, A3, b- ionone ring, E. coli, dermatophytosis, zinc, trichophyton verrucosum fungi, in calves, cryptoxanthin, exinenon, aphanin, aphaninin, myxoxanthin, dehydroretinol, fundus examination.

Enter

These diseases are very common in calves and are characterized by metabolic disorders and degeneration. The main reasons for their appearance are disturbances in the feeding of young animals, and the inability to supply the body with the necessary substances does not compensate for their ecstasy. Metabolic disorders lead to slow growth, delayed development, susceptibility to infections and invasive diseases. When calves are kept in a cold, dirty and damp room, on wet bedding, even with inadequate feeding, the loss of body heating, internal organs and flexibility, the systems cannot balance the energy expenditure. This is especially noticeable in the winter and spring months, when the body's reserves of nutrients and vitamins are depleted. Metabolic disorders are characterized by fatigue and a dramatic slowdown in calf growth and development due to starvation or increased nutrient intake to maintain life in adverse conditions.

Symptoms include sudden weight loss, loss of skin elasticity, and sunken eyes. Body temperature usually remains within normal limits, but sometimes it drops a little. In calves,

appetite, degree of fatness, skin elasticity, appearance of folds and rashes on the skin, roughness of the skin coating and shedding of wool, decreased shine of hooves, lacrimation, decreased adaptation to the dark, decreased appetite and change in quality (Lizukha), painful movement, legs and curvature of the spine, deformity of the chest, crossing of the forelegs, short-term tremors, gradually weakening, swaying when bending over , and difficulty standing up. Such disorders are especially difficult for young calves aged 2-6 months, when the proventriculus is not sufficiently developed, so they cannot fully absorb plant nutrients and energy reserves (fat).

The main goal of treatment is to restore the animal's nutritional status. This requires complete rest, a warm room, soft straw bedding and a diet rich in vitamins - skimmed milk, milk replacers, oatmeal, good hay and extra vitamins are recommended.

Calves should be gradually re-established on normal nutrition, as well as fresh green fodder and good pasture for emaciated calves. Lack of vitamins causes diseases called avitaminosis, and their lack causes hypovitaminosis. There can be a deficiency of vitamins in food, if one vitamin is lacking, for example, A or D deficiency, the manifestations are very characteristic and specific, so they have their own names, for example, rickets, polyneuritis, xerophthalmia, etc. Often, animals suffer from the lack of several vitamins at the same time, this disease is called polyvitaminosis.

The initial stage of the disease is not characteristic. This is manifested by loss of appetite, weight loss, stunted growth, and a number of other symptoms. Later, the disease takes on the character of hypovitaminosis, which is characterized by a lack of one or another vitamin. One of the common hypovitaminosis among calves is hypovitaminosis A, which is often observed in spring, winter, due to the lack of vitamin A and carotene in cow's milk. The disease is characterized by general weakness, as a result of which the calf cannot stand up after birth and remains unable to stand for several hours and sometimes days. As a rule, when a calf is born, its body temperature is low (37-38°C), its live weight is low, and then it grows and develops poorly.

Sometimes calves are born blind or lose their sight in the first days of life. Inflammatory processes in the mucous membranes of the nasal cavity, inflammation of the bronchi and lungs develop from diseases that occur in calves lacking vitamins. All this is the result of a violation of the protective function of epithelial tissues, which largely depends on the presence of vitamin A in the body. The main means of treatment and prevention of this disease should be considered complete feeding of pregnant cows and newborn calves in terms of carotene (provitamin A) and protein content. Foods that contain high amounts of provitamin A-carotene include red carrots, green hay, sprouted grains, hay, legumes, and whole grains. Therapeutic agents for hypovitaminosis A include enriched fish oil, vitamin A concentrate, etc., used daily until complete recovery.

Vitamin A (retinol) - improves the recovery, protection and development of skin and mucous membranes, prevents infertility, increases the body's resistance, has a positive effect on the organs of vision and body weight gain, participates in the management of fat, protein and carbohydrate metabolism, normalizes metabolism. Due to lack of vitamin A, the synthesis of collagen in bone tissue decreases, bone dystrophy, stunting of growth in young animals is observed.

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