UNIVERZITET U SARAJEVU - VETERINARSKI FAKULTET

PUERPERALNA PAREZA MLIJEČNIH KRAVA

Završni rad

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PUERPERAL PARESIS IN DAIRY COWS

Diploma Thesis

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Sažetak

Puerperalna pareza, poznata i kao mliječna groznica, predstavlja čest metabolički poremećaj kod visoko produktivnih muznih krava, a najčešće se javljajući neposredno nakon teljenja. Uzrokovana je naglim padom koncentracije kalcijuma u krvi (hipokalcemijom) usljed početka intenzivne proizvodnje mlijeka, što rezultira kliničkom slikom od blage slabosti do potpune paralize i uginuća ako se ne liječi. Rad analizira patofiziologiju, kliničke oblike, dijagnostiku, ekonomsku štetu, te preventivne i terapijske mjere kod puerperalne pareze mliječnih krava.

Ključni predisponirajući faktori uključuju: nepravilnu ishranu krava u suhostaju (visok unos kalcijuma i kationa), genetske predispozicije (posebno kod rasa poput Džerzej), starost, reproduktivne probleme i stresne faktore. Naglasak je stavljen na ulogu vitamina D i njegovih receptora, PTH hormona i metabolizma minerala. Pored toga, rad prikazuje povezanost hipokalcemije sa drugim oboljenjima kao što su retencija posteljice, metritis, endometritis, dislokacija sirišta, mastitis i smanjena plodnost općenito.

Dijagnostika uključuje klinički pregled, laboratorijske analize koncentracije kalcijuma u serumu bolesnih životinja i modernije metode poput EKG (Elektrokardiogram) analize. Terapija se bazira na parenteralnoj primjeni kalcijuma, dok su preventivne mjere usmjerene na pravilno balansiranu ishranu u kasnoj gravidnosti i nadzor nad metabolizmom krava u peripartalnom periodu. Efikasna prevencija i rano prepoznavanje ključni su za očuvanje zdravlja i produktivnosti stada.

Ključne riječi: Puerperalna pareza, kalcijum, vitamin D, paratireoidni hormon (PTH), mliječne krave.

Summary

Puerperal paresis, also known as milk fever, is a common metabolic disorder in high-producing dairy cows, most often occurring immediately after calving. It is caused by a sudden drop in blood calcium concentration (hypocalcemia) due to the onset of intensive milk production, resulting in a clinical picture ranging from mild weakness to complete paralysis and death if left untreated. This paper analyzes the pathophysiology, clinical forms, diagnostics, economic impact, as well as preventive and therapeutic measures related to puerperal paresis in dairy cows.

Key predisposing factors include: improper feeding of cows during the dry period (high intake of calcium and cations), genetic predispositions (especially in breeds such as Jersey), age, reproductive problems, and stress factors. Emphasis is placed on the role of vitamin D and its receptors, parathyroid hormone (PTH), and mineral metabolism. In addition, the paper highlights the association between hypocalcemia and other diseases such as retained placenta, metritis, endometritis, displaced abomasum, mastitis, and generally reduced fertility.

Diagnosis includes clinical examination, laboratory analysis of calcium concentration in the blood serum of affected animals, and more advanced methods such as ECG (electrocardiogram) analysis. Therapy is based on the parenteral administration of calcium, while preventive measures focus on properly balanced nutrition during late pregnancy and monitoring of cow metabolism in the periparturient period. Effective prevention and early recognition are key to maintaining the health and productivity of the herd.

Keywords: Puerperal paresis, calcium, vitamin D, parathyroid hormone (PTH), dairy cows.