

UNIVERZITET U SARAJEVU - VETERINARSKI FAKULTET



NEUROMUSKULARNI POREMEĆAJI PASA I MAČAKA

Završni rad

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NEUROMUSCULAR DISORDERS IN DOGS AND CATS

Diploma Thesis

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SAŽETAK

Neuromuskularni sistem čini funkcionalnu cjelinu donjeg motornog neurona, perifernog nerva, neuromuskularne veze i skeletnog mišića, čije oštećenje dovodi do zajedničkih kliničkih znakova slabosti, hipotonije, hiporefleksije i atrofije mišića. Cilj ovog preglednog rada bio je sistematizovati saznanja o anatomiji, klasifikaciji, kliničkoj slici, dijagnostici, terapiji i prevenciji neuromuskularnih poremećaja pasa i mačaka, sa osvrtom na razlike između vrsta.

Rad je izrađen kao pregled literature, uz korištenje udžbeničke građe i novijih naučnih radova iz vodećih veterinarskih časopisa. Prikazana je anatomska i fiziološka osnova sistema, uključujući motornu jedinicu i proprioceptore, te klasifikacija poremećaja prema mjestu zahvatanja, etiološkom mehanizmu i uzrastu nastanka. Opisani su dijagnostički postupci, od anamneze i neurološkog pregleda, preko laboratorijskih i slikovnih metoda, do elektrodijagnostike, genetskog testiranja i biopsije.

Prikazane su najznačajnije neuromuskularne bolesti pasa (paraliza facijalnog nerva, akutni polimijeloradikuloneuritis, nasljedne polineuropatije, sindrom laringealne paralize- polineuropatije, mijastenija gravis, paraliza izazvana krpeljima, botulizam, miozitis mastikatornih mišića, polimiozitis, mišićna distrofija) i mačaka, među kojima se izdvaja hipokalemična poliomiopatija kao najčešći uzrok akutne slabosti. Utvrđeno je da su kod pasa bolesti pretežno pasminski specifične, dok kod mačaka dominiraju metabolički uzroci; mijastenija gravis je kod mačaka rjeđa, ali češće udružena sa timomom.

Analizirano je razlikovanje četiri glavna uzroka akutne tetraplegije kod pasa, te značaj genetskog testiranja u prevenciji, ilustrovan primjerom sindroma laringealne paralize- polineuropatije. Zaključeno je da precizna dijagnoza zahtijeva multimodalni pristup, a poznavanje razlika između vrsta ima direktnu kliničku primjenu u svakodnevnoj praksi.

Ključne riječi: pas, mačka, neuromuskularni poremećaji, mijastenija gravis, polineuropatija, miopatija

SUMMARY

The neuromuscular system constitutes a functional unit comprising the lower motor neuron, peripheral nerve, neuromuscular junction, and skeletal muscle. Damage to any of these components results in common clinical signs, including weakness, hypotonia, hyporeflexia, and muscle atrophy. The aim of this review was to systematize current knowledge on the anatomy, classification, clinical presentation, diagnosis, treatment, and prevention of neuromuscular disorders in dogs and cats, with particular emphasis on interspecies differences.

This paper was prepared as a literature review based on textbook material and recent scientific publications from leading veterinary journals. The anatomical and physiological foundations of the system are presented, including the motor unit and proprioceptors, along with a classification of disorders according to the site of involvement, etiological mechanism, and age of onset. Diagnostic procedures are described, ranging from history taking and neurological examination to laboratory and imaging techniques, electrodiagnostic testing, genetic testing, and biopsy.

The most significant neuromuscular diseases in dogs are presented, including facial nerve paralysis, acute polyradiculoneuritis, inherited polyneuropathies, the laryngeal paralysis-polyneuropathy syndrome, myasthenia gravis, tick paralysis, botulism, masticatory muscle myositis, polymyositis, and muscular dystrophy. In cats, hypokalemic polymyopathy is highlighted as the most common cause of acute weakness. It was established that neuromuscular disorders in dogs are predominantly breed-specific, whereas metabolic causes predominate in cats. Myasthenia gravis is less common in cats but is more frequently associated with thymoma.

The differential diagnosis of the four major causes of acute tetraplegia in dogs was analyzed, as well as the importance of genetic testing in disease prevention, illustrated by the example of laryngeal paralysis-polyneuropathy syndrome. It was concluded that accurate diagnosis requires a multimodal approach, while knowledge of interspecies differences has direct clinical relevance in everyday veterinary practice.

Keywords: dog, cat, neuromuscular disorders, myasthenia gravis, polyneuropathy, myopathy