

UNIVERZITET U SARAJEVU - VETERINARSKI FAKULTET



Tumori kože i potkožja pasa i mačaka: 20 godina citomorfologije

Završni rad

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**Skin and subcutaneous tumors of dogs and cats: 20 years of
cytomorphology**

Diploma Thesis

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SAŽETAK

Tumori kože i potkožja su svrstani među najčešće neoplastične promjene dijagnosticirane kod pasa i mačaka u čemu se ogleda njihov značaj. Za brzu, pouzdanu i minimalno invazivnu dijagnostiku tumora kože važnu ulogu ima citologija. Cilj ovog rada bio je opisati citomorfološke karakteristike tumora kože pasa i mačaka, utvrditi učestalost tumora kože i drugih lezija dijagnosticiranih citologijom, te procijeniti njihovu povezanost sa vrstom, spolom i starošću životinja. Također, istaknut je značaj citologije u brznoj i pouzdanoj dijagnostici ovih neoplastičnih promjena u kliničkoj praksi.

Istraživanje je provedeno retrospektivnom analizom citoloških uzoraka ($n = 475$) dostavljenih na Katedru za patologiju Veterinarskog fakulteta Univerziteta u Sarajevu u periodu od 2006. do 2025. godine. Svi citološki preparati su obojeni Diff-Quick i/ili May Grünwald Giemsa bojenjem. Rezultati su pokazali porast broja citoloških uzoraka tokom posljednjih godina posmatranog razdoblja, gdje je 90% svih analiziranih uzoraka zaprimljeno u periodu od 2020. do 2025. godine. Kožne lezije su predstavljale najčešće citološke uzorke, a od svih promjena kože najzastupljenije su bile neoplazije, 61,72% (179/290). Ujedno od svih tumora dijagnosticiranih citologijom, najzastupljeniji su bili tumori kože, a zatim tumori limfnih čvorova i tumori mliječne žlijezde. Tumori kože su bili nešto češći kod pasa u poređenju sa mačkama kod kojih su na citološku dijagnostiku češće dostavljani uzorci drugih organa. Među histogenim grupama tumora kože dominirali su mezenhimalni tumori. Drugo mjesto po učestalosti zauzimali su tumori okruglih ćelija, nakon čega su slijedili epitelni tumori, dok su melanocitni tumori bili najmanje zastupljeni. Posmatrajući pojedine vrste tumora kože, najčešće citološke dijagnoze su bile lipom, mastocitom i sarkom. Utvrđena je statistički značajna povezanost između starosti životinja i pojave tumora kože, pri čemu su tumori kože bili znatno češći kod životinja starijih od 10 godina, dok su netumorske promjene kože bile češće kod mlađih jedinki. Statističkom analizom nije pronađena značajna povezanost između spola i učestalosti ili tipa tumora kože, kao ni između vrste životinje i tumora kože.

Dobiveni rezultati potvrđuju značaj citologije kao dijagnostičke metode u procjeni kožnih lezija kod pasa i mačaka, te pružaju koristan uvid u učestalost citološki dijagnosticiranih tumora kože u ispitivanoj populaciji i njihovu povezanost sa pojedinim epidemiološkim faktorima.

Ključne riječi: tumori kože, citologija, pas, mačka, učestalost tumora

SUMMARY

Skin and subcutaneous tumours are classified among the most commonly diagnosed neoplastic lesions in dogs and cats, which highlights their significance. Cytology plays an important role in the rapid, reliable and minimally invasive diagnosis of skin tumours. The aim of this paper was to describe the cytomorphological characteristics of skin tumours in dogs and cats, determine the frequency of skin tumours and other lesions diagnosed by cytology, as well as assess the association between the occurrence of skin tumours and species, sex and age. The importance of cytology in the fast and reliable diagnosis of these neoplastic changes in clinical practice was also emphasized.

The study was conducted through a retrospective analysis of cytological samples ($n = 475$) submitted to the Department of Pathology, Faculty of Veterinary Medicine, University of Sarajevo, between 2006 and 2025. All cytological specimens were stained using Diff Quick and/or May-Grünwald Giemsa staining. The results demonstrated an increase in the number of cytological samples submitted during the last few years of the research period, with approximately 90% of all analysed samples received between 2020 and 2025. Skin lesions represented the most common type of cytological sample, and neoplastic lesions were the most frequent among all skin samples 61,72% (179/290). Furthermore, from all tumours diagnosed by cytology, skin tumours were the most common, followed by lymph node tumours and mammary gland tumours. Skin tumours were more common in dogs than in cats, whereas for cats cytological samples of other organs were more commonly submitted. Among the histological groups of skin tumours, mesenchymal tumours were the most prevalent, followed by round cell tumours and epithelial tumour, while melanocytic tumours were the least common. The most frequent skin tumour types diagnoses were lipoma, mast cell tumour and sarcoma. A statistically significant association was found between the age of the animals and the occurrence of skin tumours, where these tumours were considerably more common in animals older than 10 years and nonneoplastic skin lesions were more frequent in younger animals. No statistically significant association was found between sex and the frequency or type of skin tumours, nor between animal species and the occurrence of skin tumours.

The results confirm the importance of cytology as a diagnostics method for the evaluation of skin lesions in dogs and cats, providing valuable insight into the frequency of cytologically diagnosed skin tumours in the observed population and their association with relevant epidemiological factors.

Key words: Skin tumours, cytology, dog, cat, tumour prevalence