FELINE MAMMARY TUMORS, PREVALENCE AND PATHOHISTOLOGICAL CLASSIFICATION[1]

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ABSTRACT

The aim of this investigation was to determine the prevalence of feline mammary tumors, as well as it's pathohistological classification and prevalence in different breeds of cats.

According obtained results, it is concluded that from total number of processed feline mammary tumors, 92,4% were malignant and 7,6 were benign, according to the World Health Organization criteria from 1999. The most common tumors in this investigation were tubulopapillary and solid carcinomas. Most of carcinomas were classified with grade III of malignancy. The most affected breeds were mixed breeds.

Key words: mammary tumors, pathohistological classification, malignancy grade.

INTRODUCTION

Feline mammary tumors are the third most common tumors in cats, after skin tumors and lymphomas. Mean age of detection of feline mammary tumors is 15 years. According to their histological characteristics around 80-90% of feline mammary tumors are invasive carcinomas with III grade of malignancy.

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[1] original scientific paper

Different breeds of quinces can be affected by mammary tumors,but the most affected are mixed breeds, also siamese and Persian.

Pathohistological classification of feline mammary tumors is doing according to the criteria of the World Health Organisation from 1999.

MATERIALS AND METHODS

In this investigation 27 feline mammary tumors were used. After surgical removal, tumors were fixed in 10% neutral buffered formalin, then specimens were embedded in paraffin blocks. With hand microtome were made 4 micrometers thick sections from wax blocks. Samples were stained with hematoxylin and eosin(H&E) method.

Mammary tumors in this investigations were taken from different breeds of cats, 19 mammary tumors were taken from mixed breeds, 5 from Siamese and 3 from Persian breed.

H&E stained sections of canine mammary tumors were classified by two pathologists, according to the diagnostic criteria proposed by the World Health Organisation from 1999.

RESULTS

Table 1. demonstrates the prevalence of different feline mammary tumors.

Histological type	Total
Tubulopapilary carcinoma	10
Solid carcinoma	7

Simply anaplastic carcinoma	3
Intraductal carcinoma	5
Adenoma	2
Total	27

As it becomes obvious,by considering the data presented in table 1, we can see that malignant tumors were presented in 25 cases or 92,6% while benign tumors were presented in 2 cases or 7,4%.

Table 2. demonstrates the histological grade of malignancy (HGM) in different types of feline mammary carcinomas.

Histological type	HGM I	HGM II	HGM III	Total
Tubulopapilary carcinoma	1	3	6	10
Solid carcinoma	1	2	4	7
Simple anaplastic carcinoma	0	0	3	3
Intraductal carcinoma	1	1	3	5
Total	3	6	16	25

Table 2 demonstrates the malignancy grade in different types of feline mammary carcinomas. According to the results from table 2, from total 25 feline mammary carcinomas, 16 or 64% were classified with malignancy grade III, 6 cases or 24% were classified with malignancy grade II, 3 cases or 12% were classified with malignancy grade I.
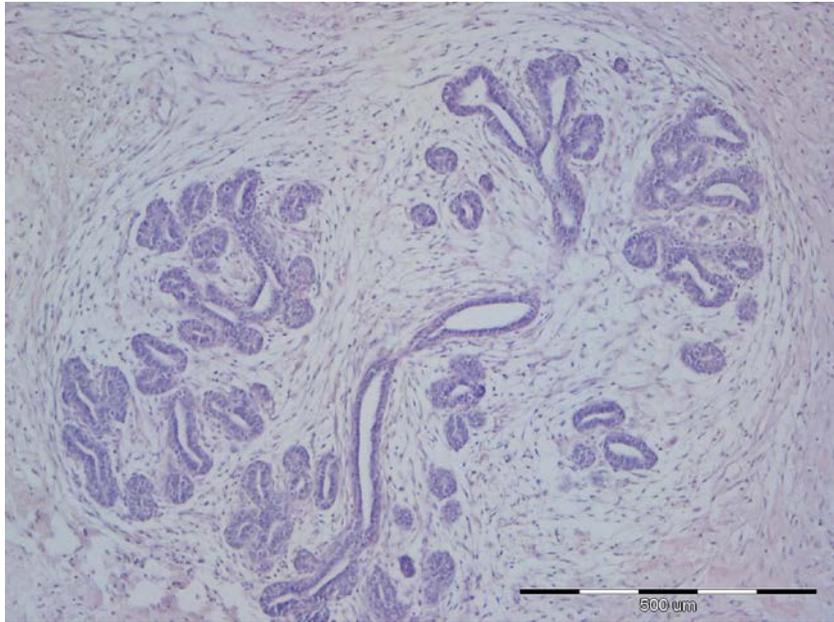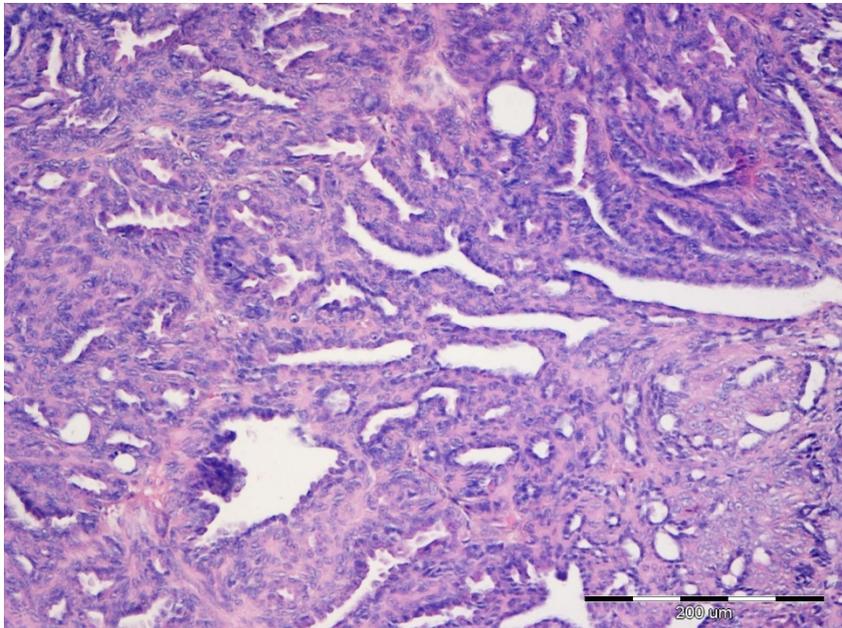
Photo 1. Fibroadenoma x10

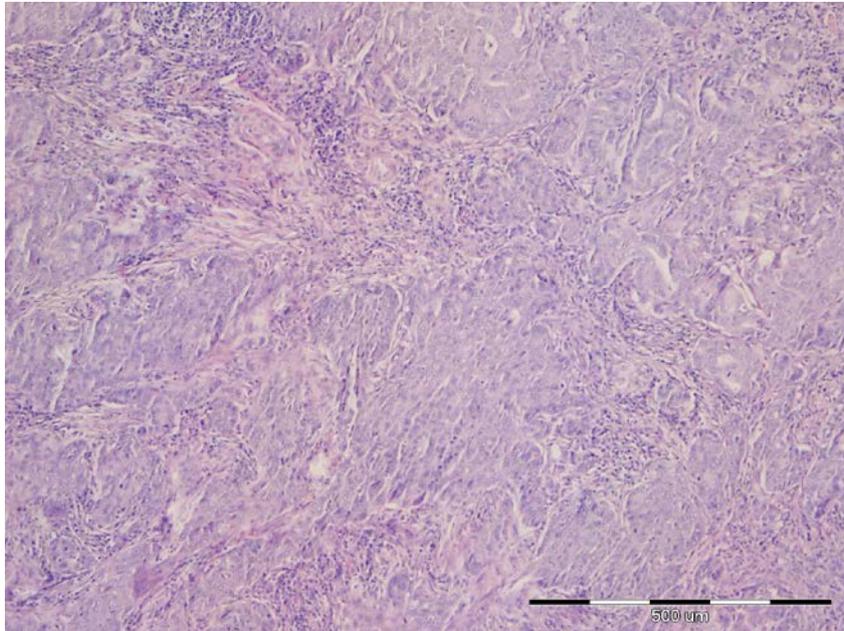Photo 2. Tubulopapillary carcinoma, grade of malignancy I, X10

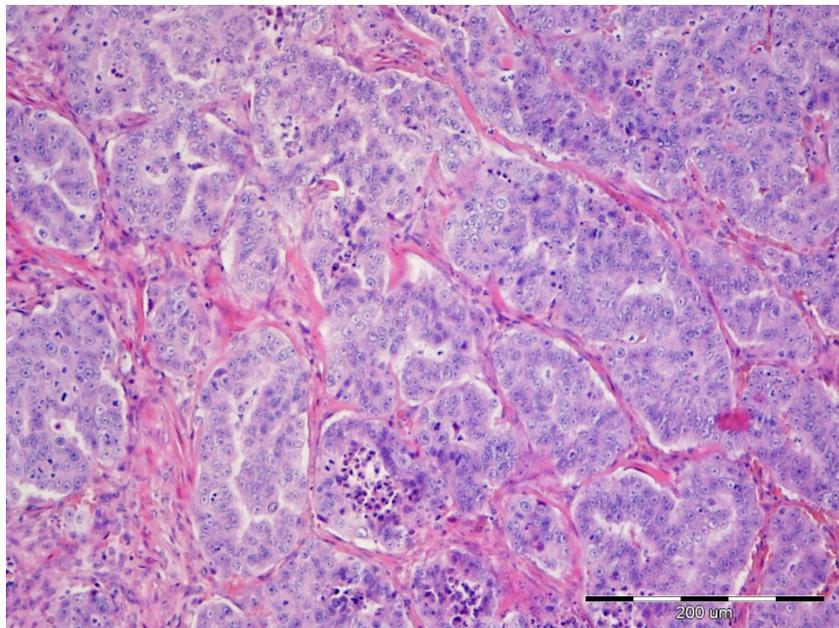Photo 3. Tubulopapillary carcinoma,grade of malignancy II, X10

Photo 4. Tubulopapillary carcinoma, grade of malignancy III, X10

DISCUSSION

Results obtained in this investigation in general correspond with the results obtained in others studies. In our investigation prevalence of malignant tumors was 92,6%, which is higher than data presented in the literature Morris et al (2013).

The mean age of quinces when tumor was removed is 13,5 years, which corresponds with data from literature Misdorp et al. (2002).

Results obtained from analysis due to breeds predisposition show that the most affected breeds are quinces from mixed breeds, which also correspond with data from literature Morris et al. (2013).

When it comes to prevalence and proportion between different types of carcinomas classified according to World Health Organisation criteria the most common malignant tumors were tubulopapillary carcinomas and solid carcinomas, which is in accordance with data from the literature Castagnaro et al. (1998)., Goldschmitd et al (2011).

When it comes about the malignancy of carcinomas, most of them were with malignancy grade III, which also corresponds with data from literature Morris et al. (2013).

CONCLUSIONS

Based on the results gained from the research of the prevalence and pathohistological classification of the feline mammary tumors, we can make the following conclusions:

1. The prevalence of the malignant feline mammary tumors was 92,6% while the prevalence of the benign tumors was 7,4%.

2. According to the histological structure, the most prevalent were tubulopapillary and solid carcinomas.

3. According to the grade of malignancy, the most frequent were carcinomas with malignancy grade III, carcinomas.

4. The mean age of the quinces when the tumor was removed was 13.5 years.

5. The most affected were quinces from mixed breeds.

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