


CONDUCT OF VETERINARIANS IN CASES OF MAMMARY TUMOR IN BITCHES

CONDUTA DE MÉDICOS VETERINÁRIOS EM CASOS DE TUMOR DE MAMA EM CADELAS

CONDUCTA DE LOS VETERINARIOS EN CASOS DE TUMOR MAMARIO EN PERRAS

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ABSTRACT

Although mammary tumors (MT) malignant are important cause of death among bitches in Brazil, some clinicians do not annotates in the medical records, relevant information on the reproductive life of the canine females, showing lack of information about the subject. Another factor that contributes to high casuistry of disease is the lack of information of owners of animals of about the importance of precocious castration on prophylaxis the MT.

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In teaching hospitals clinical veterinarians train students through hands-on experience but face challenges like workload and inconsistent teaching methods. This study aimed to record the conduct of veterinarians that serves on a Veterinary Teaching Hospital (VTH). Twenty-eight female dogs had their consultations accompanied by students trained for the study. The students followed the consultations and their owners, collecting information about the animals, owners and veterinarians that attended the animals. At the end of the consultations it found that most of the veterinarians who treated the patients did not report the disease etiology or the importance of castration in the prophylaxis of MT. The misinformation about the disease is widespread among clients and veterinarians, which reduces the possibility of early diagnosis, that is fundamental to prognostic of MT in bitches. It is important to note that the veterinarians involved assist in the supervision of students and interns as it is a teaching hospital. Thus, these students are hampered in their training. It is noted the need for educational campaigns with everyone involved in animal health, to clarify the importance of MT in dogs, allowing greater quality of life and longevity for these animals.

Keywords: Canine. Mammary neoplasia. Prevention. Professional conduct. Veterinary hospital.

RESUMO

Embora tumores mamários (TM) malignos sejam importante causa de óbito em cadelas no Brasil, alguns clínicos no país não anotam nos registros médicos informações importantes sobre a vida reprodutiva das fêmeas caninas, denotando desinformação sobre o tema. Outro fator que também contribui para a alta casuística da enfermidade é a falta de informação dos tutores dos animais sobre a importância da castração precoce na profilaxia de TM. Em hospitais universitários, os veterinários clínicos treinam os alunos por meio de experiências práticas, mas enfrentam desafios como carga de trabalho e métodos de ensino inconsistentes. Este estudo teve o objetivo de registrar a conduta de médicos veterinários (MV) que prestam atendimento em um Hospital Veterinário Universitário (HVV). Vinte e oito cadelas tiveram suas consultas acompanhadas por estudantes treinados para o estudo. Os estudantes acompanharam as consultas e seus tutores, coletando informações sobre os animais, tutores e médicos veterinários que atenderam os animais. Ao término das consultas, constatou-se que a maioria dos MV que atenderam as pacientes não informou a etiologia da enfermidade nem a importância da castração na profilaxia de TM. É importante destacar que os médicos veterinários envolvidos auxiliam na supervisão de estudantes de Medicina Veterinária e estagiários por se tratar de um Hospital Escola. Desta forma, estes estudantes ficam prejudicados em sua formação. A desinformação sobre a enfermidade é generalizada entre clientes e médicos veterinários, o que diminui a possibilidade de diagnóstico precoce, fundamental no prognóstico de TM em cadelas. Constata-se a necessidade de campanhas educativas com todos os envolvidos com a saúde animal, para esclarecer a importância de TM em cadelas, possibilitando maior qualidade de vida e longevidade para estes animais.

Palavras-chave: Cão. Conduta profissional. Hospital Veterinário. Neoplasia mamária. Prevenção.

RESUMEN

Aunque los tumores mamarios malignos (TM) son una causa importante de muerte en perras en Brasil, algunos médicos veterinarios del país no registran información importante

sobre la vida reproductiva de las perras en sus registros médicos, lo que demuestra desinformación sobre el tema. Otro factor que también contribuye a la alta incidencia de la enfermedad es la falta de información entre los propietarios de animales sobre la importancia de la castración temprana en la profilaxis de la TM. En los hospitales docentes, los veterinarios clínicos capacitan a los estudiantes a través de experiencias prácticas, pero enfrentan desafíos como la carga de trabajo y métodos de enseñanza inconsistentes. Este estudio tuvo como objetivo registrar la conducta de los médicos veterinarios (MV) que brindan atención en un Hospital Veterinario Universitario (HVU). Veintiocho perras tuvieron sus consultas monitoreadas por estudiantes entrenados para el estudio. Los estudiantes acompañaron las consultas, recogiendo información sobre los animales, propietarios y médicos veterinarios que atendieron a los animales. Al final de las consultas se encontró que la mayoría de los MV que atendieron a los pacientes no informaron la etiología de la enfermedad ni la importancia de la castración en la profilaxis de la TM. Es importante resaltar que los médicos veterinarios involucrados asisten en la supervisión de estudiantes y pasantes de Medicina Veterinaria al ser este un Hospital Docente. De esta manera estos estudiantes se ven perjudicados en su educación. La desinformación sobre la enfermedad está muy extendida entre clientes y veterinarios, lo que reduce la posibilidad de un diagnóstico precoz, esencial para el pronóstico de la TM en las perras. Es necesario realizar campañas educativas con todos los involucrados en la salud animal, para aclarar la importancia de la TM en las perras, permitiendo una mejor calidad de vida y longevidad para estos animales.

Palabras clave: Perro. Conducta profesional. Hospital Veterinario. Neoplasia mamaria. Prevención.

INTRODUCTION

Mammary tumors (MT) are the most frequent neoplasm in dogs in Brazil (RODRIGUES et al., 2019; SANTOS et al., 2020). In veterinary oncology services in Brazil, more than 50% of neoplasms diagnosed in dogs were mammary tumors in bitches (COSTA JR et al., 2016; RIBEIRO et al., 2020). In Brazil, most of these tumors are malignant (ANDRADE et al., 2012; COSTA JR et al., 2016; FELICIANO et al., 2017), with approximately 90% of malignancy being detected in mammary tumors of bitches (ANDRADE et al., 2012; COSTA JR et al., 2016; SILVA et al., 2019a).

The etiology of TM may be related to dietary, genetic, environmental, infectious and, mainly, hormonal factors (REYS et al., 2020). Thus, TM in bitches are considered hormone-dependent (SANTOS et al., 2020). Because of this, early castration is recognized as the main way to prevent the disease in female dogs (KAMIGUCHI et al., 2016). Even in female dogs already affected by the disease, but with benign tumors, castration prevents the formation of new tumors in 50% of spayed female dogs after diagnosis (KRISTIANSEN et al., 2013). These data reinforce that hormonal exposure during life increases the predisposition to develop TM and that early castration (before the first estrus) shows good results in reducing the risk of developing such tumors (KAMIGUCHI et al., 2016)

To diagnose the disease, tests such as cytology and histopathology are used (MAGALHÃES et al., 2020). Metastases must be investigated through imaging exams (CASSALI et al., 2020). After diagnosis, an early therapeutic approach is necessary so that the treatment is effective and promotes the animals' quality of life (CASSALI et al., 2020).

Despite the epidemiological importance of MT in bitches in Brazil, the medical records of care for these animals are often incomplete (BIONDI et al., 2014). Because of this, important information is lost, especially in the reproductive sphere, including castration and occurrence of reproductive diseases (pseudocyesis, abortion and others) (RIBAS et al., 2012; TORÍBIO et al., 2012). The use of contraceptives is not always investigated, and these drugs are related to the etiology of MT in bitches (RIBAS et al., 2012; TORÍBIO et al., 2012; KUTZLER, 2018).

University veterinary teaching hospitals (VTHs) are the cornerstone of clinical teaching in veterinary medicine (HUBBELL, 2008). The procedures performed in university veterinary hospitals are of inestimable value, whether due to the education that can be offered to undergraduate students, veterinary residency students and master's students, in the face of routine cases, or due to the greater access of the population to specialized

services, through extension activities (AMARAL et al., 2020). However, many resident veterinarians consider that there is a deficiency in the care they receive from veterinarians who do not teach but work in veterinary teaching hospitals (FURR and RACZKOSKI, 2021). Some of the causes of deficiencies in this type of teaching include lack of time, part-time staff leading to frequent transfers, differences between areas and work preferences of individual veterinarians (KINNISON et al., 2015).

This study was carried out at a Teaching Veterinary Hospital (TVH) and aimed to evaluate and record the conduct of veterinarians in relation to female dogs with mammary tumors (MT).

METHODOLOGY

The research was approved by the Ethics Committee of the institution where it was carried out under protocol 094/2010.

Veterinary Medicine students were trained to follow the consultations of bitches with mammary tumors. The training included reading and group discussion of scientific articles on mammary tumors. The students also followed consultations with animals bearing mammary tumors (including palpation of the mammary glands), exams performed for the diagnosis of mammary tumors in bitches (cytology, histopathology, radiography) and surgical procedures for the treatment of mammary tumors (mastectomies). Such training was carried out so that students could recognize a mammary tumor when receiving the animals to be cared for.

The consultations were carried out at a Teaching Veterinary Hospital (TVH) and the animals were treated by veterinarians who provide services at that hospital.

During the study period (five months), 28 (twenty-eight) consultations were followed up, and the bitches were selected under the sole criterion of having MT. The presence of the mammary tumor was detected at the reception by students already trained to observe the presence of masses in the mammary glands. Before entering the office, the bitches' owners were approached at the reception of the TVH by the students trained for the study. Such students collected some data in this approach at reception, which included patient age, previous appointment, mammary examination in previous appointments, and reproductive data.

When the clients entered the office, the students accompanied the owners and remained in the office for the entire time the consultation lasted, with the conduct of the

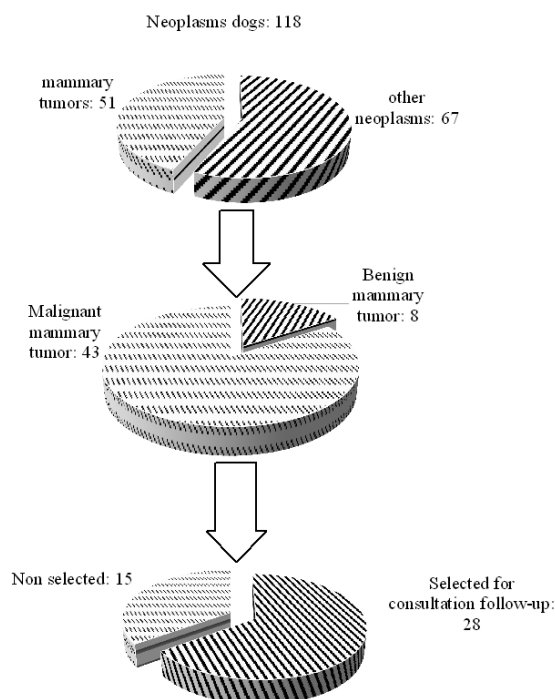
veterinarians having been recorded, especially with regard to mammary tumors. Students noted whether the veterinarians explained the etiology of the disease and how it is prevented.

All data obtained were analyzed using descriptive statistics, with percentage frequencies. Data were arranged in graphs and tables.

RESULTS AND DISCUSSION

During five months, 118 cases of neoplasms in dogs (males and females) were diagnosed at the Pathological Anatomy Laboratory of the TVH. Of these, 51 (43.22%; 51/118) were MT. In relation to the total number of neoplasms during the five months (118) (Figure 1), it was observed that there was an average of 23 neoplasms diagnoses monthly. Similar data were not found for comparison, but it is observed that the sample is high. In Brazil, cases of neoplasms in dogs and cats have increased, mainly due to increased longevity (ANDRADE et al., 2012).

Figure 1: Mammary neoplasms and tumors (n=118) diagnosed and followed up in dogs at a Teaching Veterinary Hospital for five months. Total neoplasms: 118 (other neoplasms: 67; Mammary tumors of bitches: 51). Mammary tumors of bitches (51; benign: 8; malignant: 43). Malignant mammary tumors of bitches (43; selected for consultation follow-up: 28; non-selected: 15).



Source: the authors

Regarding mammary tumors, the data obtained confirm that MT is very frequent in Brazil (ANDRADE et al., 2012; RODRIGUES et al., 2019; SANTOS et al., 2020), not being different in the Veterinary Hospital studied here (Figure 2).

Figure 2: Mammary tumors in bitches attended at in a Teaching Veterinary Hospital



Source: the authors

Among the 51 cases of these mammary tumors diagnosed in the five months of the study (Figure 1), 43 were malignant (84.31%; 43/51) and eight were benign (15.68%; 8/51) (Figure 1). These numbers show that malignant MT in the TVH are the most diagnosed, probably due to late diagnosis and delay of owners in seeking medical-veterinary services. Such results are similar to other studies carried out in Brazil (TORÍBIO et al., 2012; BIONDI et al., 2014; COSTA JR et al., 2016; RIBEIRO et al., 2020). These findings show that MT seen at the TVH have a poor prognosis due to malignancy. On many occasions, owners only seek help when the tumor is very large. In these cases, the presence of metastases is almost certain. Furthermore, benign tumors can become malignant over time (RÊGO et al., 2015). In addition, there is still misinformation on the subject among dog owners. In a survey conducted in Teresina (PI, Brazil), in which 420 people were interviewed, it was observed that more than 70% of respondents did not know that bitches can have mammary tumors (MAGALHÃES et al., 2016). In a study carried out with 11 owners of bitches, most owners only sought help for the animal because the assistance was free, because it was a scientific project (SILVA et al., 2019a).

Between of the 51 cases of MT previously mentioned, 28 female dogs were selected (Figure 1), whose consultations were followed by the students. According to information obtained before entering the offices, sixteen clients (57.14%; 16/28) went to the TVH due to the MT, while twelve (42.5%; 12/51) went to the hospital for another reason (being the tumor evident in some cases). Similar data were not observed in the literature consulted for

comparison purposes. However, it is noteworthy the fact that some owners did not give due importance to the mammary tumor of their bitches. Such conduct greatly hinders early diagnosis and treatment, which is essential for quality of life and patient survival (GÓMEZ et al., 2012; PETROV et al., 2014).

Regarding the age of the bitches, it was observed that twenty-four of them (85.71%; 24/28) were six years old or more, three bitches were between three and six years old (10.71%; 3/28) and only one (3.57%; 1/28) was less than two years old (Table 1), reinforcing the fact that MT are more common in older female dogs (CARVALHO et al., 2023). However, the presence of MT was observed in young bitches, which is not common. The fact that MT occurs in young bitches may be associated with the use of hormonal contraceptives (HONÓRIO et al., 2016; BUENO; RÉDUA, 2020). Thus, it is possible that the mammary tumors of young bitches in this study are related to the application of contraceptives by owners. The sale of contraceptives to female dogs in Brazil is common in establishments that sell veterinary products (PRADO et al., 2020). Medication of animals without a veterinary prescription is frequent among owners in Brazil (QUESSADA et al., 2010; CARVALHO et al., 2012; ZIELKE et al., 2018; SILVA et al., 2019b).

Nineteen patients (67.85%) were multiparous (Table 1) and ten of these (35.71%) had their offspring donated by their owners, which demonstrates the lack of economic interest in the puppy sale, which would reinforce the recommendation of early castration and its prophylactic effect on MT and the owner's responsibility towards their animal (LANA et al., 2007; LANGONI et al., 2011). Nine tutors were unable to inform the number of births of the bitches (Table 1). This data denotes the little importance that some dog owners dedicate to the reproductive life of females. This behavior decreases the animals' quality of life. It is important to highlight that reproductive diseases are very frequent in bitches (BORGES et al., 2021; MOURA et al., 2022; O'NEILL et al., 2019; SILVEIRA et al., 2013).

Table 1: Data on bitches with mammary tumors (n=28) treated at a Teaching Veterinary Hospital

Reason for consultation		Age			Number of births	
Mammary tumor	Other reason	More than six years	3-6 years	Less than two years	Multiparous	No information
16 (57.14%)	12 (42.5%)	24 (85.71%)	3 (10.71%)	1 (3.57%)	19 (67.85%)	9 (32.15%)

Source: the authors

Outside the vet's office, owners were asked about previous veterinary appointments. Twenty-one owners (75%; 21/28) said they had previously taken their bitches to the veterinarian before the disease (in TVH or not). Among in these 21 owners, 17 (71%; 17/21) stated that they did not remember the veterinarian examining their bitches' mammary glands. This fact highlights the little importance given by some veterinarians in relation to the examination of their patients' mammary glands. Such conduct hinders the early diagnosis, which is essential in MT of bitches (GÓMEZ et al., 2012; PETROV et al., 2014).

Twenty-six owners (92.85%; 26/28) also stated that until then no veterinarian had explained to them about MT prevention. Twenty-two owners (78.57%; 22/28) did not know about the reproductive history of their bitches and only six of them (21.42%; 6/28) reported having observed the occurrence of pseudocystitis. This reinforces the need for preventive medicine and educational campaigns for veterinarians and clients (OLIVEIRA et al., 2003).

In 21 of the consultations followed by the students (75%; 21/28), it was noted that the veterinarians involved in the consultation did not explain the importance of castration. In 22 of the consultations (78.57%; 22/28), the veterinarian did not provide information about the etiology of the MT. Such conduct demonstrates that there is still a lot of misinformation about the prevention of mammary tumors in bitches, including among professionals who should be informed about the subject. This behavior can delay diagnosis and institution of treatment. Early approach is essential in MT of bitches (GÓMEZ et al. 2012; PETROV et al., 2014) and in all types of neoplasms, both in humans and animals.

An important aspect to be highlighted is that the veterinarians who participated in the study work in a Teaching Hospital. The procedures performed in teaching veterinary hospitals are of inestimable value, whether for the teaching that can be offered to undergraduate, veterinary residency and master's students, given routine cases, or for the population's greater access to specialized services, for through extension activities (AMARAL et al., 2020). Thus, it is recommended that students work with the appreciation of ethical and humanistic dimensions, which will provide the veterinarian with the development of attitudes and values oriented towards citizenship and solidarity (BRASIL, 2019). Concern with quality training needs to be the main objective of the pedagogical project of each course, as well as its execution, since, in addition to knowledge technical, higher education institution must also contribute to forming the citizen to the world, taking into account their insertion regional and national. The emphasis on ethical and humanistic training must be present throughout the training period of the future veterinarian (PAULA et al., 2023).

Government authorities and veterinarians have a social responsibility to inform owners that disease prevention is more effective than curative medicine. The veterinarian is essential in promoting the health and welfare of animals, not only in curing diseases, but mainly to explain to owners the importance of preventive medicine. This attitude allows the reduction of euthanasia in cases of diseases that can be effectively prevented, such as MT in bitches. The decrease in cases of mammary tumors in bitches can also reduce cases of abandonment of animals. In many zoonoses centers in Brazil, one of the main causes of abandonment of dogs is illness (ALMEIDA et al., 2014), including mammary tumors in bitches.

CONCLUSION

With these results, it is concluded that educational campaigns should be implemented by government authorities, professional bodies and animal protection entities, through veterinarians. Continuing education for veterinarians with an emphasis on animal health should be encouraged by professional associations.

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DISCLOSURE

The authors inform that there are no conflicts of interest.

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