


Surgical casuistic in dogs at a Veterinary Hospital - Piauí State Federal University

Casuística cirúrgica em cães de um Hospital Veterinário - Universidade Federal do Piauí

Nhirneyla Marques Rodrigues¹; Ana Maria Quessada²; Ana Paula Barros Fonseca*³ ; Sávio Soares Barbosa Dantas¹; Jaqueline Lustosa Rodrigues Camapum¹; Filipi Alexandre do Nascimento Silva³

¹ Universidade Federal do Piauí (UFPI), Teresina – PI, Brazil

² Universidade Paranaense, Programa de Pós-graduação em Ciência Animal, Umuarama – PR, Brazil

³ Universidade Federal do Piauí, Centro de Ciências Agrárias, Programa de Pós-graduação em Ciência Animal, Teresina – PI, Brazil

ABSTRACT

The objective of this report was to record surgical procedures performed in 241 dogs in a teaching veterinary hospital. There were 40 elective surgical procedures (16.6%) and 201 therapeutic surgical procedures (83.4%). The most frequent procedure was ovariohysterectomy (OH), 65% (26/40) and 24.38% (49/201), respectively, for elective and therapeutic surgical procedures. Among therapeutic surgical procedures were registered fracture reduction (16.91%, 34/201), mastectomies (13.93%, 28/201), drainage of the otohematoma (12.94%; 26/201) and ophthalmic surgical procedures (5.47%, 11/201). The high percentage of therapeutic surgical procedures conducted demonstrates the complexity of the cases attended daily in a teaching veterinary hospital.

Keywords: Canines. Surgery. Survey. Ovariohysterectomy.

RESUMO

O presente relato tem o objetivo de registrar procedimentos cirúrgicos realizados em 241 cães em um Hospital Veterinário Universitário. Foram realizados 40 procedimentos cirúrgicos eletivos (16,6%) e 201 procedimentos cirúrgicos terapêuticos (83,4%). Em ambos os casos, o procedimento mais frequente foi ovariosalpingohisterectomia (OSH), 65% (26/40) e 24,38% (49/201) respectivamente para procedimentos cirúrgicos eletivos e terapêuticos. Entre os procedimentos cirúrgicos terapêuticos foram registradas redução de fraturas (16,91%; 34/201), mastectomias (13,93%; 28/201), drenagem de otohematomas (12,94%; 26/201) e procedimentos cirúrgicos oftálmicos (5,47%; 11/201). A alta porcentagem de procedimentos cirúrgicos terapêuticos demonstra a complexidade dos casos atendidos diariamente em um Hospital Escola.

Palavras-chave: Canino. Cirurgia. Levantamento. Ovariosalpingohisterectomia.

Correspondence to:

Ana Paula Barros Fonseca
Universidade Federal do Piauí, Campus Universitário Ministro
Petrônio Portela
Rua Dirce de Oliveira, 3597, Bairro Ininga
CEP: 64049-550, Teresina – PI, Brazil
e-mail: anapaula-92@hotmail.com

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It is known that improvement in the quality of life of companion animals generally improves their longevity (Bentubo et al., 2003). Such increased longevity may be associated with increased diagnosis of diseases (Ribeiro, 2016),

and some diseases can be surgically corrected. However, studies quantifying the types of surgical procedures adopted for treating dogs in Brazil and the rationale behind adopting these procedures are still scarce (Cruz-Pinto et al., 2015). To contribute new data on this understudied subject, in this study, we recorded the surgical procedures performed on canines (i.e. domestic dogs) at a university veterinary hospital (UVH) located in Teresina (Piauí, Brazil) over a 7-month period.

All dogs undergoing surgical procedures during the study period (November 2011 to June 2012) were included in our assessment. Information on surgical interventions was obtained, and the results were converted into percentages of all patients (total = 241 dogs) for presentation and discussion.

The majority of patients were females (158/241, 65.56%), and a minority of patients were male (83/241, 34.44%). Probably, this majority of female patients may be related to the great demand for elective spaying of bitches (Inoe et al., 2004; Silveira et al., 2013)

Breed was not defined for most of the dogs treated. This result reflects the UVH clientele, for whom most of the canines brought in as patients are mongrel dogs, as was also observed in another locality (Franco & Silva-Molano, 2009).

There were 40 (16.60%) elective surgical procedures performed, which consisted of 26 (26/40, 65%) ovariohysterectomies (OH), 13 orchietomies (32.5%), and one amputation of the first digit (2.5%) (Table 1). All patients were healthy, according to pre-surgery evaluations. For elective surgical procedures, animals that

are not ready should be treated and monitored until the appropriate time (Shmon, 2007).

Sterilization was more frequently performed on females than males. This procedure is very prevalent because many owners want to avoid unwanted offspring and future reproductive diseases, mainly mammary tumor (Magalhães et al., 2016) and pyometra (Evangelista et al., 2010).

There was 100% success in these elective surgical procedures, with no death. Such a result is generally expected in these cases (Shmon, 2007).

Of the total 241 surgical procedures performed, 201 were considered therapeutic (83.4%). Such results are expected in a university teaching hospital like the one in this study, where most cases are complex and forwarded by other veterinary hospitals. Among the 201 surgical procedures considered therapeutic, the most common were OH (49/201, 24.38%). The most frequent illness that led to OH surgical procedures was pyometra, in 32 of 49 cases (65.30%). These results are similar to those reported in other studies in Brazil (Silveira et al., 2013; Cruz-Pinto et al., 2015). The remaining 17 therapeutic OH surgical procedures were performed because of dystocic parturition and fetal death (34.69%).

Fracture reduction surgeries were the second most frequent, constituting 34 of 201 therapeutic surgical procedures (16.9%), which is reasonable given that fractures are commonly dealt with in veterinary clinical practices on the canine species (Kemper & Diamante, 2010; Souza et al., 2011).

Mastectomies were performed in 28 of 201 cases (13.93%), representing the third most frequent type of

Table 1 – Surgical procedures performed on dogs at a university veterinary hospital (Teresina, Piauí, Brazil) over November 2011 to June 2012 (n = 241)

	Elective surgical procedures		Therapeutic surgical procedures	
	Number	Percentages	Number	Percentages
Ovariohysterectomy	26	10,79%	49	20,33%
Fracture reduction			34	14,11%
Mastectomies			28	11,62%
Drainage of the otohematoma			26	10,79%
Ophthalmic surgical procedures			11	4,56%
Orchietomies	13	5,40%	07	2,90%
Cutaneous sutures			06	2,49%
Cystotomies			05	2,07%
Ablation of the scrotal sac			05	2,07%
Perineal herniorrhaphy			05	2,07%
Corrections of luxations			05	2,07%
Removal of neoplasias			05	2,07%
Amputation of the digit	01	0,41%		
Others			15	6,22%
Total	40	16,6%	201	83,4%

surgical procedure performed for a disease. Mammary tumors (MT) are the most frequent type of neoplasia among dogs in Brazil (Biondi et al., 2014).

Drainage of otohematoma was performed on 26 patients (26/201, 12.94%). This surgical procedure is frequently performed by veterinary services in Brazil (Cruz-Pinto et al., 2015; Rodrigues et al., 2016; Xavier, 2012).

Among the 201 therapeutic surgical procedures, 11 were considered ophthalmic (5.47%). Of these, four entropy corrections were performed (4/11, 36.36%), three enucleations of the eyeball (27.27%), two replacements of the third eyelid gland (18.18%), and two repairs of the flaps of the third eyelid (for correction of corneal ulcer) (18.18%). Ophthalmic surgical procedures are common in veterinary clinical practices (Niza, 2015; Xavier, 2012).

Seven orchiectomies were carried out for therapeutic reasons (7/201, 3.48%), most often for treatment of prostatic hypertrophy. Orchiectomy is the most effective treatment for dogs affected by this condition (Mostachio et al., 2015).

Further, six cases of cutaneous sutures (6/201, 2.99%) were recorded, mostly due to trauma. In other veterinary services, it is also common to suture cutaneous wounds (Niza, 2015; Xavier, 2012). It is inferred that this result was observed because traumas are frequent among the canine species (Figuera et al., 2008; Lopes, 2016; Vidane et al., 2014).

Five luxation's were corrected surgically (5/201, 2.49%), three of the patella and two of the coxofemoral joint. Patellar dislocation is one of the most common abnormalities affecting the knees of dogs (Bezerra et al., 2013; Souza et al., 2009). Traumatic hip dislocations are important orthopedic conditions in dogs, with a high incidence due to trauma (Barbosa & Schossler, 2009), as detected in the present study.

Five cystotomies (2.49%) were performed, all with a diagnosis of urolithiasis. Such a condition is relatively common in small animal medicine, and the treatment of choice is surgical intervention (Silva et al., 2013).

Ablation of the scrotal sac was performed in five dogs (5/201; 2.49%) to treat for diseases, mainly severe scrotal dermatitis.

Perineal herniorrhaphy was performed in five patients (5/201, 2.49%). Surgical treatment, adopted in the present study, is the most effective method to repair hernias (Marques et al., 2015; Mortari & Rahal, 2005; Ribeiro, 2010). However, there is a successful employment report of the association of the techniques of colopexy, deferentopexy and pediculated autograft of tunica vaginalis

for occlusion of the hernial ring via abdominal access in a dog (Costa et al., 2017).

Two neoplasms of the anal gland (one malignant and one benign), two cutaneous (unidentified) tumors, and one cutaneous lipoma were surgically removed. Studies in Brazil found that neoplasia were the second (Bentubo et al., 2007; Figuera et al., 2008) or third (Trapp et al., 2010) most frequent cause of death in dogs.

There were two cases of rectal prolapse corrected by surgical replacement (2/201, 0.99%). The treatment for this is replacement, which may or may not be associated with colopexy (Guedes et al., 2012). In the cases described here, only replacement was performed. Patients were referred to the medical clinic for treatment of the cause of prolapse, probably verminosis, which is one of the most common causes of this disease (Aronson, 2007; Guedes et al., 2012).

Two cases of eventration were surgically corrected (2/201, 0.99%). This affection is usually due to trauma, and the correction is surgical (Soares et al., 2012).

Two cases of intramedullary pin removal were recorded (2/201, 0.99%). Such procedures are considered minor, and are performed after the end of the surgical treatment of fractures by emplacing an internal prosthesis (i.e. intramedullary pin).

The following cases were represented by only one patient out of a total of nine patients (9/201, 4.48%) not fitting the categories discussed thus far: limb amputation, incisional biopsy, evisceration correction, acetabular denervation, thoracic esophagotomy for removal of foreign body, umbilical herniorrhaphy, exploratory laparotomy, sialoadenectomy, and urethrostomy.

Among the surgical procedures performed during the study period, ovariohysterectomy was the most frequent, both for elective and therapeutic cases, emphasizing the importance of surgical sterilization, both to avoid unwanted pregnancy or reproductive diseases and to treat diseases of the reproductive system.

The high percentage of therapeutic surgical procedures that were performed reinforces the complexity of the cases attended to daily in a university teaching hospital.

Conflict of interest

All authors declare there were no conflicts of interest.

Ethics Statement

Approval of the Committee of Ethics on Experimentation with Animals (CEEA / UFPI: Protocol no. 063/11) was obtained for the above study.

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