INCIDÊNCIA DAS MALFORMAÇÕES VERTEBRAIS TORÁCICAS EM CÃES DA RAÇA BULDOGUE FRANCÊS, PUG E BULDOGUE INGLÊS

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Objetivos

As malformações vertebrais congênitas são frequentemente identificadas em cães de raças braquicefálicas com cauda em espiral. O estudo tem como objetivo principal determinar a incidência de malformações vertebrais em cães braquicefálicos das raças Pug, Buldogue Francês e Buldogue Inglês com ou sem manifestações neurológicas associadas. E ainda, investigar se há diferenças entre as raças referente à presença de malformações vertebrais e de déficits neurológicos.

Métodos e Procedimentos

Este projeto foi aprovado pela Comissão de Ética no Uso de Animais da Faculdade de Medicina Veterinária (protocolo CEUA nº 9566130521). A pesquisa está sendo realizada na FMVZ-USP. Informações como raça, idade, sexo, peso, achados clínicos e radiográficos de cada animal avaliado foram coletadas.
Os cães selecionados foram submetidos à avaliação clínica, neurológica e de imagem. Os pacientes foram classificados em 5 categorias de acordo com seu estado neurológico, sendo:

0 – Normal;
1- Dor espinhal sem disfunção neurológica
2- Ataxia e paraparesia ambulatória
3 – Paraparesia não ambulatória
4 – Paraplegia com nocicepção
5- Paraplegia sem nocicepção

Realizou-se radiografias da coluna vertebral cervical, torácica, lombar e sacral nas projeções laterolateral e ventrodorsal. Para o procedimento ocorrer de maneira adequada, os animais passaram por sedação prévia. A interpretação das imagens foi obtida por radiologista experiente. Informações como a presença de anomalias vertebrais, sua quantidade, características e região acometida foram documentadas.
Com base nos dados obtidos dos testes executados, os cães foram categorizados em 4 grupos: aqueles sem malformação vertebral e distúrbios neurológicos (Grupo I); ausência de malformação vertebral com sinais neurológicos (Grupo II); portadores de malformação vertebral sem disfunção neurológica (Grupo III) e presença de malformação vertebral e sinais neurológicos (Grupo IV).

Resultados

Observou-se 18 animais até o momento. Dessa amostra, 14 cães foram analisados, pois 4 animais ainda não passaram por avaliação completa e, portanto, não foram incluídos. Dos 14 pacientes, 10 são da raça Buldogue Francês e 4 são Pugs, sendo 13 machos e 1 fêmea.
Dos cães submetidos a avaliação clínica e neurológica, 6 (grupos I e III) não tiveram manifestações clínicas (grau 0) e 8 (grupos II e IV) apresentaram algum sinal (grau 1). Do total de animais com alterações, 87.5% pertencem ao grupo IV e 12.5% ao grupo II.

Na radiografia da coluna vertebral, encontrou-se 12 (85.7%) animais com malformações (grupos III e IV), sendo 2 (16.6%) da raça Pug e 10 (83.3%) da raça Buldogue Francês. Apenas 2 animais (83.3%) não tinham defeitos vertebrais (Figura 1). O tipo mais frequente é a hemivértebra (52.9%). Foram observados um total de 51 anomalias vertebrais e a maioria delas se localizavam em região torácica (84.3%). A maioria dos cães obtiveram mais de um tipo de malformação na coluna.

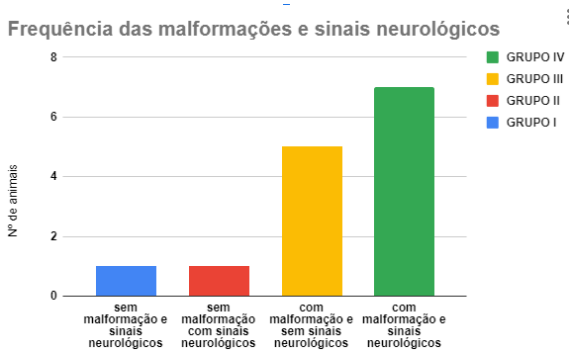

Figura 1: Gráfico de classificação dos grupos baseado na presença ou não de malformações e sinais neurológicos

Conclusões

A avaliação radiográfica das malformações vertebrais congênitas em cães da raça Buldogue Francês e Pug, até o momento, confirma a hipótese de que as anomalias são um achado comum nessas raças, com 85.7% dos cães do estudo acometidos. Apesar da maior frequência de sinais clínicos em animais com anomalias, os resultados da Figura 1 sugerem que os sinais clínicos não dependem das malformações para surgirem. Não foi possível fornecer informações precisas a respeito de todos os achados e diferenças entre as raças, sendo necessário mais estudos com um grupo maior de cães.

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INCIDENCE OF THORACIC VERTEBRAL MALFORMATIONS IN FRENCH BULLDOGS, PUGS AND ENGLISH BULLDOGS

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Objectives

Congenital vertebral malformations are commonly identified in brachycephalic breeds of dogs with 'screwed tail'. The main objective of the study is set the incidence of vertebral malformations in dogs of brachycephalic breeds as Pug, French Bulldog and English Bulldog with or without neurological signs. Also, investigate if there is a difference between the breeds regarding the presence of vertebral malformations and neurological deficits.

Materials and Methods

This study was approved by Ethics Committee on the Use of Animals of School of Veterinary Medicine (CEUA nº 9566130521). The quest is being accomplished in FMVZ-USP. Information such as breed, gender, clinical and radiographic findings of each animal observed were collected. Selected dogs underwent to clinical, neurological and imaging evaluation. Patients were classified in grades based on neurological status:

0 – Normal
1 – Spinal pain without neurological dysfunction
2 - Ambulatory paraparesis
3 - Nonambulatory paraparesis
4 – Paraplegia with nociception
5 – Paraplegia without nociception

Ventrodorsal and laterolateral radiographs of the cervical, thoracic, lumbar and sacral vertebral column were done. For the proper occurrence of procedure, animals underwent previous sedation. Images were interpreted by an adept radiologist. Information like the presence of vertebral anomalies, number, attributes and affected region were documented.

Based on data obtained by evaluation, dogs were rated in 4 groups: those without vertebral malformation and neurological deficits (Group I); absence of vertebral malformation with neurological signs (Group II); presence of vertebral malformation without neurological deficits (Group III) and presence of vertebral malformation and neurological signs (Group IV).

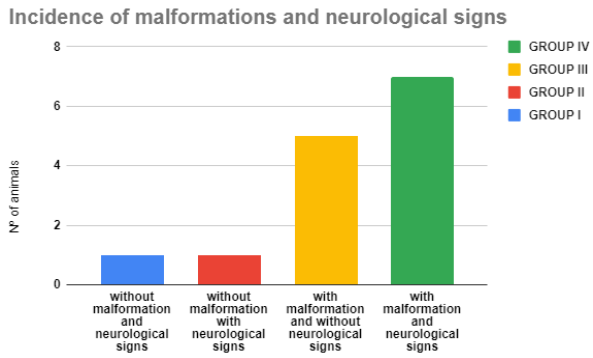
Results

18 animals were observed so far. In this sample, only 14 dogs were evaluated, because 4 animals have not finished complete analysis. In the group of 14 dogs, 10 were French Bulldogs and 4 were Pugs, with 13 males and 1 female.

In clinical and neurological evaluation of the dogs, 6 (groups I and III) had no clinical signs (grade 0) and 8 (groups II e IV) showed any signal (grade 1). Of the animals with changes, 87.5% belongs to group IV and 12.5% to group II.

From the vertebral column radiographs, 12 animals (85.7%) with anomalies were identified (groups III and IV), and a distribution between breeds of 2 (16.6%) Pugs and 10 (83.3%)

French Bulldogs. Only 2 animals (83.3%) had no vertebral defects (Picture 1). Hemivertebra is most frequently type of spinal abnormality (52.9%). A total of 51 vertebral anomalies were observed, and the most of them were in thoracic column (84.3%). The majority of dogs obtained more than one type of vertebral defect.



Picture 1: Grade of groups chart according the presence or not of malformations and neurological signs

Conclusions

The radiographic evaluation of congenital vertebral malformations in French Bulldog and Pug dogs so far, supports the hypotheses that these anomalies are a common finding in brachycephalic breeds, with 85.7% study dogs affected. It is overt that clinical signs are more often in animals with anomalies. Although clinical signs in animals with anomalies are more often, Figure 1 suggests that clinical signs do not need the presence of malformations to appear.

It was not possible to provide accurate information about all findings and differences between breeds, further studies with a larger group of dogs are necessary.

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