UNIVERSITÀ DEGLI STUDI DI MILANO

CONCORSO PUBBLICO, PER ESAMI, PER IL RECLUTAMENTO DI N. 1 UNITÀ DI PERSONALE AFFERENTE ALL'AREA DEI FUNZIONARI – SETTORE SCIENTIFICO-TECNOLOGICO, CON RAPPORTO DI LAVORO SUBORDINATO A TEMPO INDETERMINATO PRESSO L'UNIVERSITÀ DEGLI STUDI DI MILANO - DIPARTIMENTO DI MEDICINA VETERINARIA E SCIENZE ANIMALI – CODICE 22494

La Commissione giudicatrice della selezione, nominata con Determina Direttoriale n. 16124 del 04/10/2024, composta da:

Prof.ssa Silvia Clotilde Bianca Modina	Presidente
Prof. Cristian Edoardo Maria Bernardi	Componente
Dott. Giampaolo Bosi	Componente
Dott.ssa Lucia Iacopino	Segretaria

comunica i quesiti relativi alla prova orale:

GRUPPO DI QUESITI N. 1

1 Le norme relative alle operazioni da effettuare al termine dell'attività in sala settoria.
2 I rischi connessi con l'operatività in sala settoria e le misure di emergenza da adottare.

Brano in inglese: Despite their distinct embryonic origins, the skull and brain are highly integrated. Understanding the covariation between the skull and brain can shed light on anatomical, cognitive, and behavioral traits in extant and extinct species. Domestic dogs offer a unique opportunity to investigate skull-brain covariation due to their diverse skull morphologies and neural anatomy. To assess this question, we examined T2-weighted MRI studies of 62 dogs from 33 breeds, plus an additional 17 dogs of mixed or unknown breeds. Scans were opportunistically collected from a veterinary teaching hospital of dogs that were referred for neurological examination but did not have grossly observable structural brain abnormalities. As the neurocrania of dogs become broader and shorter, there is a significant decrease in the gray matter volume of the right olfactory bulb, frontal cortex, marginal gyrus, and cerebellum. On the other hand, as the neurocrania of dogs become narrower and longer, there is a significant decrease in the gray matter volume of the olfactory bulb, frontal cortex, temporal cortex, amygdala, hypothalamus, hippocampus, periaqueductal gray, cerebellum, and brainstem. Selective breeding for specific skull shapes may impact canine brain anatomy and function.

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doi: 10.1002/cne.25668.

GRUPPO DI QUESITI N. 2

1 Il principio della "marcia in avanti" e le procedure di sicurezza da adottare prima, durante e dopo l'esecuzione dell'attività in sala settoria.
2 Persone non ammesse ai lavori della sala settoria.

Brano in inglese:

Objective: Retrospective observation of computed tomographic images to describe an anatomical difference in the shape of the pterygoid bone in French bulldogs (FB) and determine its prevalence and effect on the cross-sectional area of the airway, in comparison with normal conformation in brachycephalic and mesocephalic dogs.

Animals and procedure: Computed tomographic studies of FB and cocker spaniels (CS) that underwent examination of the head were reviewed. The shape and cross-sectional area of the pterygoid bone was recorded and compared between groups.

Results: Thirty-six CS and 34 FB were included. In 79.41% (27/34) of FB, there was an abnormal shape of the pterygoid bone in comparison with all 36 CS, which had a normal shape of the pterygoid bone. Only 20.58% (7/24) of FB had a normal shape. The cross-sectional area of the airway at the level of the pterygoid bone for FB was 88.78 mm2. The area was larger in FB with normal shape (average: 95.70 mm2, SD ± 15.98) than those with abnormal shape (average: 86.98 mm2, SD ± 20.32), though this difference was not statistically significant ($P > 0.05$). Cocker spaniels had a larger airway cross-sectional area than dogs in both FB groups, with a mean of 142.28 mm2 (± 24.87) and $P < 0.05$.

Conclusion and clinical relevance: French bulldogs frequently have an abnormal conformation of the pterygoid bone. This study identified further anatomical factors that might contribute to upper-airway obstruction in brachycephalic dogs.

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Milano, 13 novembre 2024

La Commissione

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