

Veterinary Medical Writing

SECTION EDITOR



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An illustrated look at brachycephalic dogs

They say that a picture paints a thousand words, and for a medical writer, that sounds like a no-brainer for efficient working. Nevertheless, despite the relatively recent introduction of concepts such as infographics, graphical abstracts, and graphic medicine in the world of medical communications, the written word remains king. But if the fundamental goal of medical communications is to promote understanding of medical science in as many people as possible, whatever their background, is the visual content format underused?

Picture the scene. It's silly season, the office is empty (even "From the Horse's Mouth" is on holiday), and your MEW Vet Section editor has just finished reading the excellent "Comics aren't just for kids", a recent article in this publication by Era Mae Ferron.¹ And she is inspired! She has been toying with the idea of doing graphic-novel-style medical content for a while, and now she has learned that graphic medicine is a *thing*!

The following graphic medicine article, "Everything that medical writers need to know about brachycephalic dogs", is the result of that inspiration. It takes a hot topic from the

veterinary world, brachycephalic dog welfare, and is based on my own experience as a veterinary surgeon working with these lovely animals. Whilst creating this article, I reflected on the applications of graphic medicine, or perhaps more accurately "graphic pathography"² in medical communications and formulated some thoughts: does this article have more (or less) impact in this form than if the same information had been given in a 1500-word article? And, correspondingly, does this result in improved retention of the key message? Green and Myers² have identified patient care, medical education, and the social critique of the medical profession as areas in human medicine where the graphic medicine format can be applied to enhance teaching and patient care. Are there similar applications for veterinary medicine or for medical writing? Or could its use be expanded, for example, to a graphic format of the summary of product characteristics of pharmaceuticals? Finally, and deftly sidestepping the learning style controversy of educational theory, is the benefit (or otherwise) of graphical medicine appreciated by all members of the audience, or will text (or

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doi: 10.56012/VYUZ6450

even audio) always be preferred by some?

These are all questions I invite the reader to mull over when viewing this article. Graphic medicine has the potential to enhance understanding of medical information and a growing evidence base will inform medical communication professionals how it is best applied. However, what I can say for sure having completed this project, creating the picture probably takes as long as writing those thousand words.

References

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Everything

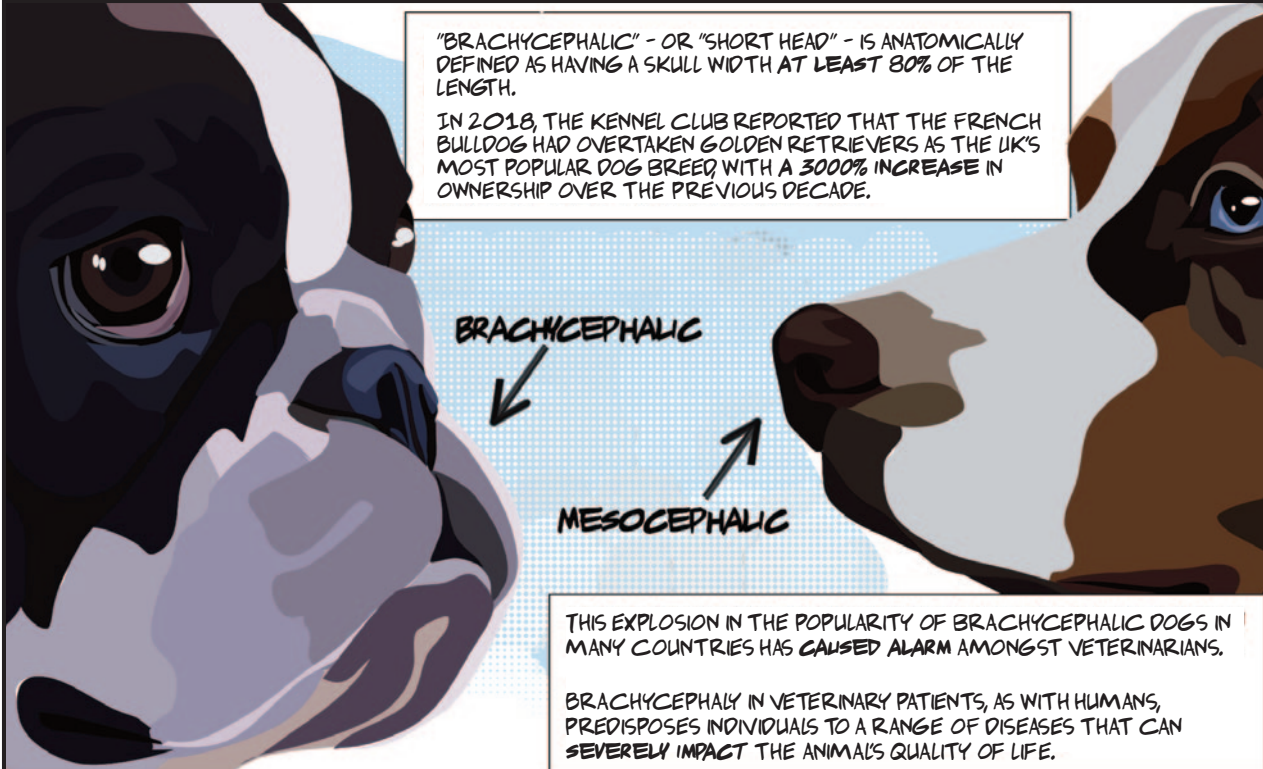
THAT MEDICAL WRITERS NEED TO KNOW ABOUT

Brachycephalic Dogs

~AN ANIMAL WELFARE COMMUNICATION~

TEXT AND GRAPHICS: LOUISA MARCOMBES
FREELANCE MEDICAL WRITER





"BRACHYCEPHALIC" - OR "SHORT HEAD" - IS ANATOMICALLY DEFINED AS HAVING A SKULL WIDTH AT LEAST 80% OF THE LENGTH.

IN 2018, THE KENNEL CLUB REPORTED THAT THE FRENCH BULLDOG HAD OVERTAKEN GOLDEN RETRIEVERS AS THE UK'S MOST POPULAR DOG BREED, WITH A 3000% INCREASE IN OWNERSHIP OVER THE PREVIOUS DECADE.

BRACHYCEPHALIC

MESOCEPHALIC

THIS EXPLOSION IN THE POPULARITY OF BRACHYCEPHALIC DOGS IN MANY COUNTRIES HAS CAUSED ALARM AMONGST VETERINARIANS.

BRACHYCEPHALY IN VETERINARY PATIENTS, AS WITH HUMANS, PREDISPOSES INDIVIDUALS TO A RANGE OF DISEASES THAT CAN SEVERELY IMPACT THE ANIMAL'S QUALITY OF LIFE.

NEVERTHELESS, AS WELL AS DOGS, BRACHYCEPHALY IS DELIBERATELY BRED FOR IN NUMEROUS DOMESTIC SPECIES...



24 DOG BREEDS ARE DEFINED AS BRACHYCEPHALIC, EIGHT OF WHICH ARE AMONGST THE 31 MOST POPULAR BREEDS IN THE US.²

PUG

ENGLISH BULLDOG

FRENCH BULLDOG
AKA "FRENCHIE"

THE FACTORS DRIVING THIS RISE IN POPULARITY ARE WELL DESCRIBED..

BRACHYCEPHALIC DOGS HAVE BEEN OVER-REPRESENTED IN MARKETING NOT ONLY FOR ANIMAL PRODUCTS...

...BUT ALSO FOR PRODUCTS TOTALLY UNRELATED TO THE PET INDUSTRY, SUCH AS MOBILE PHONES AND SOFAS.

FURTHERMORE, THE PHOTOGENIC NATURE OF BRACHYCEPHALIC DOGS, ALONG WITH THE CHARACTERISTIC CHARISMA OF THESE BREEDS MEANS THEY ARE POPULAR SUBJECTS FOR THE SOCIAL MEDIA POSTS OF CELEBRITIES AND INFLUENCERS.

AND THE MORE EXTREME THE BRACHYCEPHALIC PHENOTYPE, THE GREATER THE SOCIAL MEDIA APPEAL.

FLAT-FACED DOGS ARE **LESS HEALTHY** THAN THEIR MESOCEPHALIC COUNTERPARTS³ AND ARE PREDISPOSED TO DISEASES THAT AFFECT MULTIPLE BODY SYSTEMS:

- OCULAR DISEASE WITH EYELID MALFORMATION AND CORNEAL ULCERATION
- CROWDING OF TEETH CAUSING SEVERE PERIODONTAL DISEASE.
- SKIN AND EAR PROBLEMS - ASSOCIATED WITH EXCESSIVE SKIN FOLDS AND A PREDISPOSITION FOR ATOPIC SKIN DISEASE, RR OTITIS
- CONGENITAL HIATAL HERNIA WITH GASTRO-OESOPHAGEAL REFLUX.
- HEMIVERTEBRAE INCREASING THE RISK OF NEUROLOGICAL DISEASE.
- ORTHOPAEDIC DISEASE SUCH AS HIP DYSPLASIA OR PATELLA LUXATION.
- REPRODUCTIVE DIFFICULTIES DUE TO FETO-PELVIC DISPROPORTION RESULTING IN A VERY HIGH CAESARIAN RATE.
- RESPIRATORY DYSFUNCTION DUE TO OBSTRUCTIVE AIRWAY DISEASE.

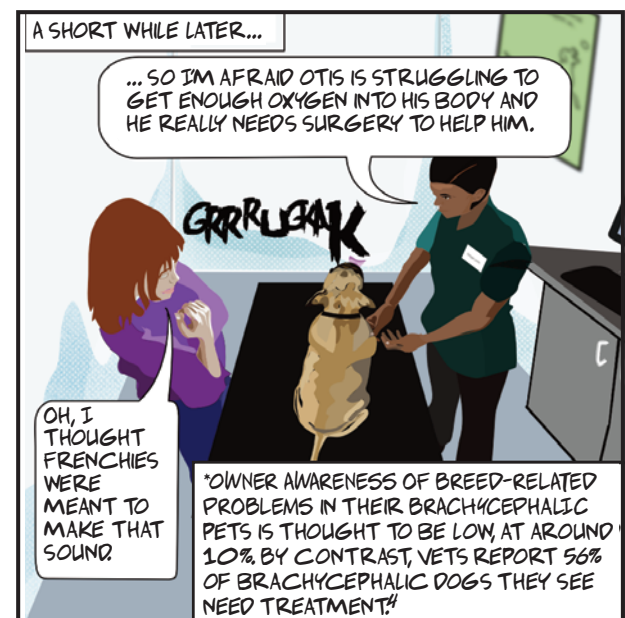
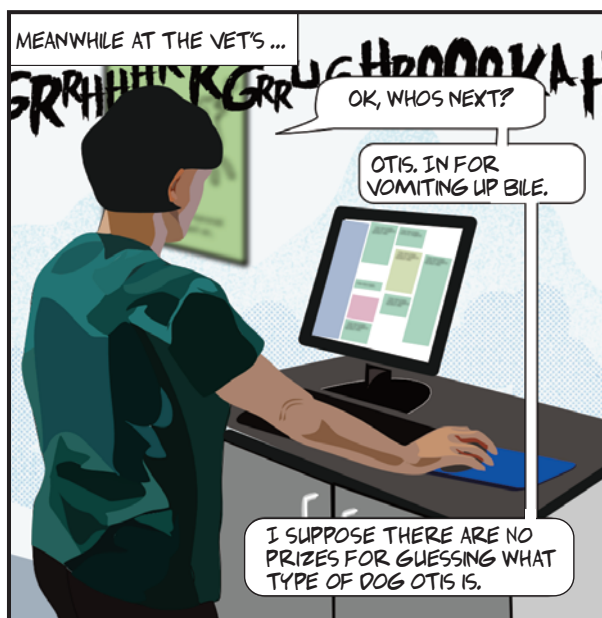
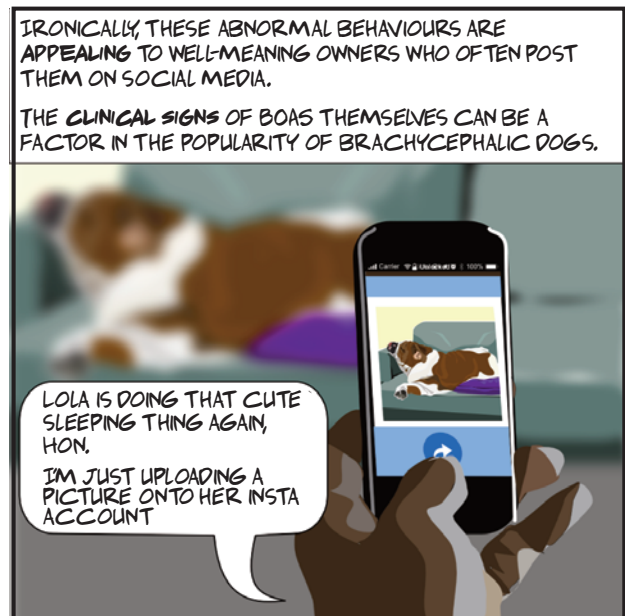
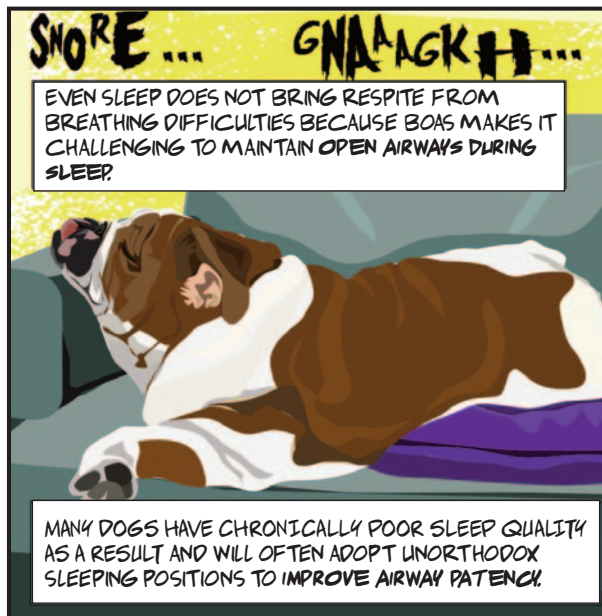
THE FACIAL FLATTENING RESULTS IN AIRWAY STENOSIS AND OBSTRUCTION, TERMED "BRACHYCEPHALIC OBSTRUCTIVE AIRWAY SYNDROME" (BOAS). BOAS HAS A DEMONSTRABLY NEGATIVE IMPACT ON QUALITY OF LIFE OF AFFECTED ANIMALS.

THE FOLLOWING ANATOMICAL CHANGES ARE SEEN IN DOGS WITH BOAS: NARROWED NOSTRILS, ELONGATED SOFT PALATE, OVERSIZED TONGUE, AND HYPOPLASTIC LARYNX AND TRACHEA.

AS A RESULT, THE RESPIRATORY FUNCTION IN AFFECTED DOGS CAN BE **SEVERELY COMPROMISED** AND IS OFTEN SIGNALLLED BY A CHARACTERISTIC STERTOROUS BREATHING.

THE RESPIRATORY INSUFFICIENCY THAT BOAS CAUSES MEANS AFFECTED ANIMALS HAVE POOR EXERCISE TOLERANCE AND EXERCISE-INDUCED COLLAPSE IS COMMON.

BRACHYCEPHALIC DOGS ALSO ARE AT HIGH RISK OF DEVELOPING **HEAT STROKE** IN HOT WEATHER.

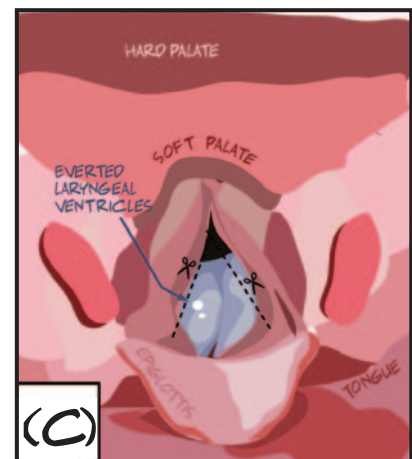
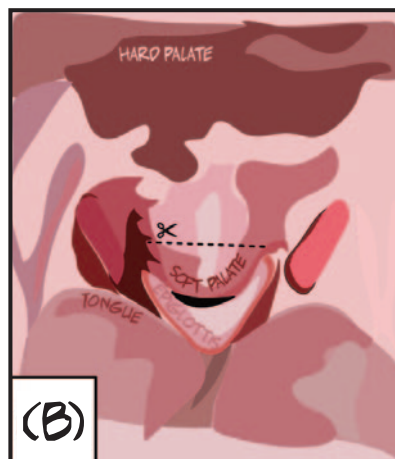
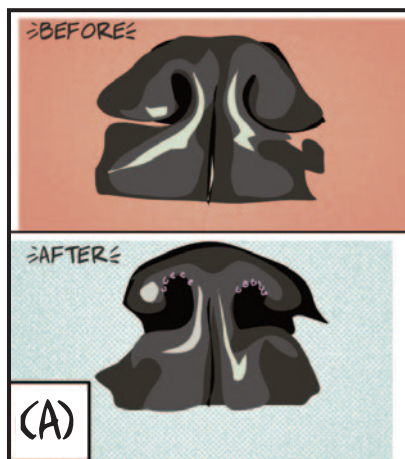


CORRECTIVE SURGERY FOR BOAS INVOLVES SEVERAL INTERVENTIONS:

- WIDENING OF STENOTIC NARES (A)
- PALATOPLASTY OF THE ELONGATED SOFT PALATE (B)
- LARYNGEAL VENTRICULECTOMY (C)
- TONSILLECTOMY

BOAS SURGERY CARRIES A RISK OF MAJOR COMPLICATIONS.

POSTOPERATIVE DYSPNOEA SECONDARY TO TISSUE SWELLING AND ASPIRATION PNEUMONIA ARE COMMONLY REPORTED.⁵



MANY VETS WHO REGULARLY ANAESTHETISE COMPANION ANIMALS ANECDOTALLY REPORT THAT BRACHYCEPHALIC DOGS TAKE LONGER THAN MOST OTHER PATIENTS TO RECOVER FROM GENERAL ANAESTHESIA, IRRESPECTIVE OF THE SURGICAL PROCEDURE THAT THEY HAVE UNDERGONE

A COMMONLY HELD BELIEF AMONGST VETERINARIANS IS THAT THIS IS BECAUSE THE ENDOTRACHEAL TUBE ALLOWS THE DOG TO BREATHE PROPERLY, POSSIBLY FOR THE FIRST TIME IN ITS LIFE.

COME ON, LITTLE GUY. IT'S ALL OVER, YOU CAN WAKE UP NOW!

BRACHYCEPHALY IN DOGS PREDISPOSES THE ANIMAL TO SEVERE CLINICAL DISEASE WHICH HAS SIGNIFICANT IMPACT ON ITS QUALITY OF LIFE. SO UNIQUE ARE THE HEALTH PROBLEMS THESE BREEDS FACE, FRENCH BULLDOGS ARE NO LONGER CONSIDERED A "TYPICAL DOG" HEALTH-WISE.⁶

THE VETERINARY PROFESSION IS LEADING THE DRIVE TO REVERSE THIS TREND THROUGH AWARENESS AND EDUCATION INITIATIVES AIMED AT VETERINARY PROFESSIONALS, OWNERS, BREEDERS, POLICY-MAKERS, MARKETING PROFESSIONALS AND INFLUENTIAL CELEBRITIES.

HOW CAN MEDICAL WRITERS HELP TO IMPROVE THE WELFARE OF BRACHYCEPHALIC BREEDS?

1.

ASK YOURSELF IS AN IMAGE OF A BRACHYCEPHALIC DOG ESSENTIAL FOR THE CONTENT OF YOUR PROJECT.

IF THE ANSWER IS "NO", THEN OPT TO USE AN IMAGE OF A DOG WITH A NORMAL CRANIOFACIAL MORPHOLOGY.

IF YOUR PROJECT ABSOLUTELY REQUIRES AN IMAGE OF A BRACHYCEPHALIC BREED, THEN CONSIDER USING A SUBJECT WHICH HAS BEEN BRED RESPONSIBLY.

2.

IN DECEMBER 2021, THE KENNEL CLUB IN THE UK REVISED THEIR BREEDING GUIDELINES FOR FRENCH BULLDOGS TO PRODUCE PUPPIES WITH ELONGATED MUZZLES AND OPEN NOSTRILS.

THE ONLY ACCEPTABLE RATIONALE FOR USING IMAGES OF EXTREME BRACHYCEPHALY IS TO ILLUSTRATE THE CLINICAL IMPACT OF BOAS AND OTHER BREED-ASSOCIATED DISEASE.

FLARED NARES

ELONGATED MUZZLE

3.

ENGAGE WITH ORGANISATIONS WHICH ARE WORKING TO RAISE AWARENESS ABOUT THE WELFARE OF BRACHYCEPHALIC DOGS. CURRENT CAMPAIGNS CAN BE FOUND HERE:

[HTTPS://WWW.FECAVA.ORG/POLICIES-ACTIONS/HEALTHY-BREEDING-3/](https://www.fecava.org/policies-actions/healthy-breeding-3/)

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ACKNOWLEDGEMENTS:

THE AUTHOR WOULD LIKE TO THANK TSM CHARLESWORTH AND HENRY SMITH FOR THEIR GUIDANCE AND ADVICE DURING THE CREATION OF THIS ARTICLE.

CONFLICTS OF INTEREST:

THE AUTHOR DECLARES NO CONFLICTS OF INTEREST.

DISCLAIMER

THE OPINIONS EXPRESSED IN THIS ARTICLE ARE THE AUTHORS OWN AND ARE NOT NECESSARILY SHARED BY EMWA.

THE END