Attitudes to and opinions of dog castration – vet survey results

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When it comes to castration in dogs, surgical castration is often considered the norm by vets in practice. A choice is available to clients, but how often do vets discuss this with them? Particularly, for those more reluctant clients?

A two-year-old male, neutered cocker spaniel.

To look into this further, an online survey was conducted to gather information about canine neutering. Invitations were distributed through several channels and most of the questionnaire items were attitude statements with five answer options:

- strongly agree
- agree
- disagree
- strongly disagree
- no opinion

Questions asked vets about perceptions and options to prevent breeding and sexual behaviours in dogs; most were asked on separate pages and respondents could not return to a question once

they had moved on. The survey was completed by 411 vets.

Most recommended permanent neutering of male and female dogs, although awareness of various alternatives to surgical neutering was apparent.

Background

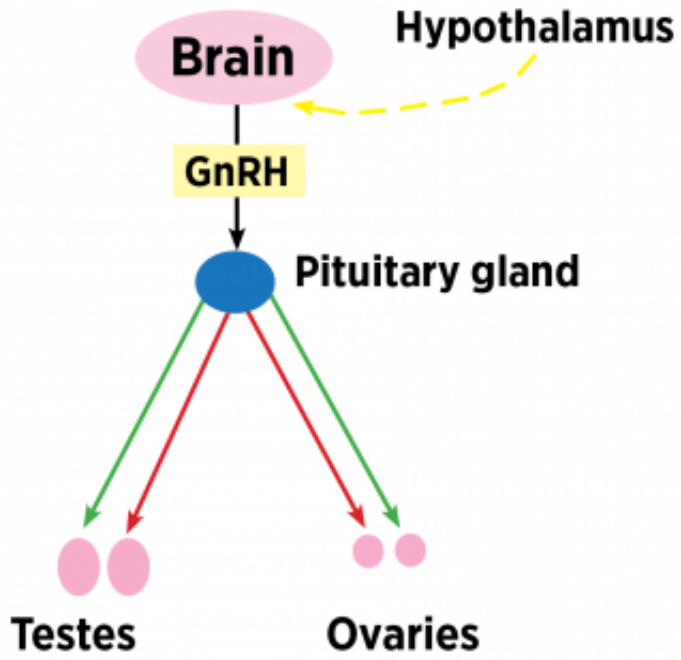
Several approaches to the control of reproduction have been used in many species of animals, including rodents, dogs, cats, cows and monkeys. While most of this work was aimed at creating contraceptive methods for humans, some of it was designed to establish alternatives to surgery for animals. A wide variety of technical issues and drawbacks, as well as social and political factors, have had the effect of limiting the availability of licensed products for contraception and fertility control in animals.

The vast majority of the available literature on canine neutering pertains to the advantages, disadvantages and prevalence of surgical neutering in dogs, with little research or emphasis on the other options available. With the trends towards clinical audit and the growing application of informed client consent in veterinary practice, vets should be aware of what and, more importantly, why they are doing what they do when it comes to their approach to neutering of dogs.

Interestingly, in several European countries, surgical neutering is considered mutilation and not routinely performed, with many Scandinavian countries only permitting it for specific medical reasons, rather than a prophylactic approach.

Alternatives are available to surgical castration. Chemical castration can be achieved with agents such as arginine-stabilised zinc gluconate, which was available in the US for many years. When injected into the testicles, these agents cause atrophy of the tubules and result in sterilisation of more than 90% of male dogs.

Unfortunately, plasma testosterone levels were only reduced by about half. The product is no longer available on the US market because the residual testosterone levels and associated behaviours were considered undesirable. This approach may still have a place in developing countries where surgical intervention is not available or where maintenance of testosterone levels in dogs may be desirable for social and behavioural reasons.



The hypothalamic-pituitary-gonadal hormone axis, which shows the interaction among the various reproductive hormones.

More recent approaches have looked at the role gonadotropin-releasing hormone (GnRH) agonists play and new therapies have become available or are on the horizon. These drugs range from slow-release agonists through to contraceptive vaccines generating antibodies to luteinising hormone (LH)-releasing hormone and have been shown to be of use in both male and female dogs (Walker et al, 2007).

Several GnRH agonists have been shown to stimulate or suppress GnRH and, thus, gonadal activity in both males and females of numerous species with few side effects. These include buserelin (a short-acting stimulant), leuprolide (mid to long-acting suppressant) and deslorelin (long-acting suppressant and short-acting stimulant).

The longer-acting agonists cause a downregulation of the GnRH receptors, causing a suppression of LH and follicle-stimulating hormone (FSH) production in the pituitary, thus affecting the gonadal hormone levels. As a consequence of reducing gonadal hormones, gametogenesis is suppressed and this results in effective and reversible chemical castration of males and protracted anoestrus in females.

The study's aim was to gather information and assess perceptions about canine neutering by questioning respondents about their attitudes to, and opinions of, neutering and the products available. The survey could be completed by the public, vets and VNs. This article focuses on the responses from vets regarding castration in male dogs.

Methods

The survey questions were drafted and refined using an online survey publisher, following pilot testing of questions. The survey was launched and invitations to participate were distributed through a website, email and a press release. It was open for participation for two months in 2010.

Every UK resident who completed the survey received a free chocolate bar and a chance to win a retail voucher worth £250 if he or she entered contact information.

Participants were informed all responses would remain confidential and personal information would not be shared with any other company; completion was taken as consent to use the data provided. The information provided has been kept strictly confidential and has only been used to produce summary results.

The entire questionnaire was made up of five sections and respondents were told it should take no more than 10 minutes to complete.

The questionnaire included questions for all respondents, as well as specific questions for the public only or vets or VN only; thus, respondents did not answer every question. The survey had a specific and guided structure, so respondents were led to certain questions and sections, depending on their responses to specific screening questions.

A total of 22 questions specific to veterinary professionals were asked about perceptions and options to prevent breeding and sexual behaviours in dogs. Most questions were asked on separate pages and, since respondents could not go back to previous pages, they could not go back and change any of their previous responses based on their response to a subsequent question.

Statistical analysis of the data included cross-tabulations and chi-square or Fisher’s exact tests for categorical variables such as gender and age. Results are reported as number and per cent values, with odds ratios (OR) and 95% confidence intervals (CI) for significant differences. The total numbers vary as some vets failed to answer all the questions.

Results

Table 1. Demographic information for 411 veterinarian respondents

Question and response categories	N	%
Gender		
Female	270	71%
Male	112	29%
Age		
18-24	13	3%
25-39	249	65%
40-59	110	29%
60-79	12	3%
No response	27	
Ever owned a dog?		
Yes	358	87%
No	53	13%

N = number.

Table 1. Demographic information for 411 veterinarian respondents.

Of the 411 vets who completed the survey, almost three-quarters were female and two-thirds were younger than 40 years of age (**Table 1**). In addition, 267 (65%) owned a dog and 91 had owned a dog in the past; thus, 358 (87%) vets had ever owned a dog. Most (81%) vets considered their dog to be a pet only and did not indicate it was used for breeding, showing, agility, working or other uses. Ownership of a dog was not associated with any differences in responses to the questions asked in this part of the survey.

When considering routine neutering of all dogs, 76% of vets said they did recommend neutering as a routine procedure for all dogs and female vets were significantly more likely to say yes to this question compared with male vets (OR = 2.1, 95%; CI = 1.3-3.4; P = 0.006). Significant age differences were present in the responses to this question, with more of the younger vets answering yes and more of the older vets answering no (**Table 2**).

When questioned about routine neutering of male dogs, 62% of vets said they did recommend neutering for male dogs not intended for breeding. Interestingly, vets were more likely to always recommend surgical neutering for female dogs not intended for breeding (94% of vets with no gender difference) compared to male dogs not intended for breeding (94% versus 62% of vets; OR = 10.1, 95%; CI = 6.4-15.9; P =