AN OVERVIEW OF EARLY AGE STERILIZATION

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THE AVMA POSITION ON EARLY-AGE SPAY AND NEUTER

Resolved:
That AVMA supports the concept of early (8-16 weeks of age) ovariohysterectomies and gonadectomies in dogs and cats, in an effort to stem the overpopulation problem in these species.



With over 25,000 dogs and cats euthanized in San Diego county shelters annually, early age sterilization is being viewed as one way to decrease San Diego's pet overpopulation problem.[1] Communities across the United States which actively encourage these procedures report dramatic decreases in the number of unwanted litters being surrendered to their shelters. Unfortunately, many San Diego shelters have found resistance from local veterinarians. As a result, potentially fertile puppies and kittens are being released to adopters who frequently fail to sterilize their animal as promised.

Reluctant veterinarians worry that sterilizing immature animals may pose harmful and permanent side effects, even though no scientific data exists which indicates that these procedures can only be safely performed on older animals.[2] In fact, prepubertal gonadectomy in dogs and cats is considered by most researchers to be a safe and effective means of controlling the companion animal population. And, while some veterinarians are worried that physiologic changes may occur as a result of early age spay and neuter surgeries, the more relevant concern should be *do these changes cause harm to the animal?*

Studies

A number of early age spay/neuter studies conducted over the past twenty five years have indicated that spays and neuters can be safely performed on immature animals. Two of the most recent studies extensively tracked and reviewed the health and behavior of puppies and kittens sterilized prior to puberty.

The first study paired 11 well-matched male puppies and 11 pairs of well-matched female puppies. For each pair, researchers neutered one animal at approximately 7 weeks, the other animal at about 7 months. Every animal was weighed and measured at regular intervals, however no significant difference in weight, length, general health or behavior between the pups neutered early and the pups neutered at 7 months was found.[3]

A similar study involving kittens found that any differences between cats neutered at 7 weeks and 7 months were insignificant. Differences observed between these two groups of kittens and mature cats was statistically significant; however, these variances did not appear to affect the health of the animals in a negative way.[4]

Specific Concerns

Behavior And Adopter Satisfaction- A survey was sent to owners of early age sterilized animals and to a control group consisting of owners with unsterilized animals and animals sterilized at traditional ages. Adopters of animals sterilized immaturely reported fewer behavioral and medical problems than other study participants.[5]

Skeletal Growth - Animals sterilized immaturely tend to have an extended growth period with growth plate closure delayed up to four months.[6,7] While growth plate closure is crucial, researchers have found no problems resulting in long bone development. Studies relating to bone density and fracture susceptibility are needed.

Secondary Sex Characteristics - A tendency toward immature secondary sexual characteristics was seen in animals sterilized prior to puberty. The penis, prepuce and os penis appear infantile in male puppies while male kittens lacked penile spines. Female kittens and puppies had underdeveloped vulvas. Even with the immature nature of the external genitalia in both female and male puppies and kittens, no clinical problems were evident .[8]

Urinary System - Animals sterilized prior to puberty show no greater predisposition to incontinence than those sterilized at or after puberty. The incidence of urinary incontinence is very low in both intact and neutered cats. Although estrogen- responsive urinary incontinence is seen more often in spayed female dogs, to date there is no data to suggest that there is a higher incidence in dogs sterilized at an early age.[9]

Early age sterilization does not appear to predispose cats to Feline Urological Syndrome (FUS).[10] Measurements of the urethral openings in dogs and cats have shown that the opening itself does not appear to be influenced by the age of sterilization.[11] [12]

Obesity - Research in both cats and dogs has indicated that obesity is no more likely in animals sterilized immaturely than those sterilized at a conventional age.[13] [14]

Surgical Considerations

Anesthesia - While anesthesia presents a risk for any animal, prepubescent animals tolerate anesthesia well. Recovery times are faster for immature animals than older animals.[15] Preanesthetic medication contributes to stress reduction while isoflurane inhalation anesthesia allows for rapid recovery. Immature animals considered as surgical candidates should be screened carefully and be free from known bacterial, viral and parasitic infections.*[16]

Surgery - A non-abrasive surgical scrub should be used. Alcohol should not be utilized as a prep scrub due to its cooling effect. *Body temperature must be closely monitored.* Feedback from veterinarians performing early age sterilization has indicated that the procedures are easier and faster than when performed at conventional ages. [17] However, *gentle tissue handling is imperative as the immature organs are friable.* The advantages of sterilizing immature animals include improved visibility of intra-abdominal structures as well as less fat and vasculature, and reduced surgery time.[18]

Recovery - Immature animals appear to recover faster from anesthesia and heal faster than older animals. Juvenile animals are more prone to hypothermia, therefore a recirculating water blanket should be utilized both during and after surgery. *Hypoglycemia can be prevented by feeding a very small meal 3-4 hours prior to surgery and presenting food shortly after standing. Fluids containing 5% Dextrose may be given to slowly recovering animals.*[19]

Discussion

California state law mandates that any dog or cat adopted from an animal shelter be sterilized. Although many local shelters are trying to sterilize animals prior to adoption, any animal care and control agency which releases an unsterilized animal can only collect a deposit and require the adopter to sign a contract promising that the animal will be spayed or neutered by a specific date.[20] [21] Sadly, spay/neuter contracts haven't motivated adopters to comply with state sterilization laws and are difficult to enforce. Furthermore, motivation to spay or neuter a companion animal appears to diminish the longer an adopter must wait to have the animal sterilized.

The national compliance rate for sterilization by adopters appears to be less than 60%. [22] These numbers seem to be in keeping with statistics from The San Diego County Department of Animal Control. Although the problem of pet overpopulation and the benefits of spaying and neutering are discussed with each adopter from this local agency, only 56% of adopters were recently known to be in compliance with state law. * [23]

Even with aggressive follow up by shelter personnel, increased educational efforts and low cost spay/neuter clinics, wanting to breed a pet and considering sterilization "not necessary" were indicated as the primary reasons pet owners across the United States fail to spay or neuter their animals.[24] As a result of this apathy, shelters that release unsterilized animals of any age have justified fears that they are <u>contributing</u> to the problems of overpopulation. Shelters throughout San Diego County are looking at communities such as Medford, Oregon which has performed early age sterilization surgeries for over 20 years and in one study, reported a euthanasia decrease of 68%.[25] Clearly, spaying and neutering all animals prior to adoption is the only guarantee that adopted animals will be unable to add to our community's pet overpopulation crisis.

Conclusion

Sterilization after six months of age became conventional practice because most veterinarians were more experienced with older animals and therefore more comfortable performing surgical procedures on adolescent and mature dogs and cats. *With this in mind, veterinarians are encouraged to reconsider the overwhelming benefits of early age sterilization, review available data and discuss their concerns with those who are experienced in performing prepubescent spays and neuters.* Veterinarians who are considering performing early age spay/neuter surgeries should gradually "push back" the ages of the animals they are willing to sterilize and find their own comfort level.[26]

Early age sterilization is safe and beneficial to individual animals and can dramatically reduce the number of unwanted dogs and cats entering shelters. The authors, a veterinarian and humane educator, appeal to others in the veterinary and animal care and control communities to work together in order to reduce the number of animals euthanized in our shelters.

A copy of the video "The Case For Early Neutering: A Tool For Companion Animal Population Control" may be obtained on loan from the SDCVMA. Veterinarians seeking more information about early age sterilization are encouraged to contact Dr. David Zanders at Westwood Bernardo Veterinary Clinic 619/485-7570 or Janet Winikoff at Rancho Coastal Humane Society 760/753-6413.