

EARLY AGE NEUTERING: PERFECT FOR EVERY PRACTICE

W. Marvin Mackie, D.V.M.
Animal Birth Control
San Pedro, CA

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In 1987, Leo L. Lieberman, D.V.M., authored an illuminating study entitled "A Case for Neutering Pups and Kittens at Two Months of Age." As background, he brought together information from the few individual practitioners and four humane shelters who were routinely neutering juveniles (3 to 5 months) and neophytes (8 to 12 weeks). His study was punctuated with reference to 8 to 12 week old subjects, and was, for all practical purposes, the formal introduction to our profession of "Early Age Neutering". The term quickly came to mean any elective surgical sterilization on a dog or cat at less than the conventional age of six months or more.

The negative response of our profession to his article was way out of proportion to the mere suggestion that we re-look at an empirical decision to sterilize the dog and cat younger than six months of age. The concern over change manifested itself in many ways; first, the Henny Penny ("the sky is falling") syndrome; second, a created listing of all those things that might possibly go wrong; and finally, the emotional response that elective surgery on the pup and kitten is somehow unconscionable, barbaric, unwholesome and down-right ghoulish.

There are several indications that early age neutering is not a new concept, but rather, one that has not yet entered into the mainstream of our small animal practice. Early in this century, reference was made to the sutureless spay in two-month old pets. In 1950, my family's working farm pup was mail ordered and arrived spayed at three and a half months. However, while in veterinary school in the early 1960's, I was taught that six to eight months was the appropriate age for spay/neuter surgery. Strangely, no studies to support this have been discovered.

When I first read Dr. Lieberman's article, I had no trouble with the concept of early age spay/neuter. Having grown up on an Idaho farm, the neutering of young farm animals was commonplace to me. I have witnessed first-hand the normal and healthy development of all types farm animals neutered at a young age. This positive bias toward early age spay/neuter also stems from my concern regarding the pet overpopulation problem and the fact that my practice (four clinics) is limited to spay/neuter work. Early age spay/neuter has become vital to shelters, both public and private, rescue groups and foster care givers who embrace the neuter before adoption (NBA) policy in their efforts to help curb pet overpopulation. Since youngsters are far easier to place, early age neutering affords these agencies an advantage in their adoption efforts. Given a choice, an adoption client will choose the neutered pet over the un-neutered pet. Breeders, too, benefit from early age spay/neuter by neutering their non-breeding stock of young pups and kittens prior to selling them.

Progress in anesthesia over the last 20 years has blessed our profession with several incredible injectable compounds and two truly fine inhalant compounds. the injectables (Ketaset, Telazol,

Rompum, Acepromazine, and Valium) can even be mixed for further enhancement of the perfect anesthetic plane for surgery. In lesser doses (considered pre-op levels), the injectables can be topped up with low levels of Halothane or Isoflurane. In 1994, a small, informal publication by the Association of Animal Shelter Veterinarians publishes a listing of eleven different anesthesia protocols then being used. Most were in combinations and every combination was listed. Each has its devotees. It was clear to me that whatever protocol you are using for mildly invasive, short, well-animal surgery could and should be adapted for the more youthful juvenile or neophyte sterilization patient as well. It is more important that you be familiar and comfortable with your anesthesia/patient responses than to adapt to a colleague's protocol. Using your own protocol, simply dose back for your smallest patient.

The amazing tolerance of the pre-pubescent to anesthesia and the surgical procedure itself is best illustrated in the report of a study by Texas A&M wherein senior veterinary students, in a teaching environment, performed spay/neuters on 1,988 subjects ranging in age from eight weeks to over five months. The study was designed to report the short-term complications, i.e. complications experienced at surgery or those that developed within the next seven days. The incidence of complications was very low for all classes and technically the lowest for the less than 12 weeks of age group. This observation speaks well for itself. However, what really stands out is the length of time these teaching patients were under anesthesia during prep and surgery. Rounding off for brevity, females were "in surgery" for 60 minutes +/- 23 minutes, males for 21 minutes +/- 17 minutes. This is an astonishingly long period of time! It certainly points out the youngsters' resilience and ability to tolerate the procedure. Since an expected surgical time is 10 to 20 minutes, this study should be extremely valuable as a confidence builder for the uneasy practitioner.

From the moment the Lieberman article was published, various studies and considerable posturing pro and con has been on going. My presentation is not designed to be a review of the studies, but rather a look at where we are now and what it means to you, the practitioner. To the surprise of most observers, including researchers, nothing has come to light that would suggest red flags necessitating a return to the six to eight month guideline. There were differences between the unneutered and neutered subjects but not between those neutered at 7-weeks and those neutered at 7-months.

In an article in DVM Magazine, Dr. Johnny Hoskins, DVM, PhD, ACUIM, and author of Veterinary Pediatrics, referred to a legitimate list of concerns. He offered that there is "...no evidence in the literature to support claims that early age sterilization increases risk." Additionally, he states, "...the advantages far out-weigh the risks."

I know of six telephone surveys, all of which are quite close in results. About 85% of cats and 70% of dogs in pet owning households were reported as neutered (which sounds pretty good); however, in response to the question of whether female dogs and cats had litters before the spay, 20% of the owners said "Yes, one or more!"

I want to point out to you why early neutering is perfect for your practice. Those of us who are providing Neuter Before Adoption (NBA) for shelters and care groups are only accessing 10-15% of all newly acquired pets: 85%-90% of the pets are acquired from other sources and, most likely, are unneutered. Ideally, many of these pets will be coming to your hospital for their early health care. What makes early age spay/neuter so appropriate is that neutering can be scheduled as part of your well-care package. The plan is that the veterinarians and staff speak

enthusiastically and with a presumed assumption that the present pet will be getting its respective spay or castration with the last vaccination of the series. By then, these pets are totally known to you and are ready. In most cases, the surgery for dogs will take place with the rabies vaccination at four months. This works out nicely as one trip to your office includes the last vaccination, neuter, certificate of sterility and certificate of rabies. The neutered dog is then ready to license, which in most areas is at a reduced fee. Everyone wins! The surgery for cats will most likely be at three months. At my clinics, when a client calls regarding the best time to spay/neuter their three month or older cat/dog, we answer with, "Now is the perfect time." Most clients readily accept their veterinarian's confident recommendation of an early age spay/neuter.

What is so vital here is that the client come in now rather than be delayed a few months. Pet owners have a busy home life, which equals procrastination and forgetfulness and before they know it, estrous has struck. Most clients are not prepared to understand the single mindedness of purpose and the degree to which their pet will go to effect a union. This quite often results in one of those 20% "oops" litters. House arrest is not an effective method of pet birth control.

With what we know now, we can help the client avoid this human procrastination trap, and we must, since the cost in client anxiety and pet overpopulation is so vital. The most recent position statement by the SVMA gives direction, importance and comfort to all involved.

The American Veterinary Medical Association in its *Position on Early-Age (Prepubertal) Spay/Neuter of Dogs and Cats*, approved by its Executive Board in April, 1999"...Resolved, that the AVMA supports the concept of early (prepubertal, 8 - 16 weeks of age) gonadectomy in dogs and cats, in procedures, veterinarians should use their best medical judgement in deciding at what age gonadectomy should be performed on individual animals."

So, we are now armed with the knowledge that there is a societal and client need to reduce the risk of accidental ("oops") litters by absolute prepubertal neutering. Also, we have the assurance of multiple studies providing evidence of development similar to the traditionally-aged patient. Without a doubt, it is time to thoughtfully bring early age neutering into your practice.

To all practitioners who first think of moving from six months to six weeks, the task can be a bit daunting. We seemingly have the perception that something so small and cuddly must also be delicate and therefore tolerate of minimal latitude for error. Quite the opposite, these furry little creatures are marvelously resilient and quickly recover from this relatively short procedure.

For the age grouping from four months and older for pups and three months and older for kittens, there are no special needs or concerns. You may use your established anesthetic protocol and general elective surgery instructions to the client.

In the pre-pubescent, the discoveries you will find in surgery, without exception, are:

1. Less bleeding
2. Excellent visualization
3. Elastic tissue for easy ligature placement
4. Everything in miniature and prepubescent; therefore, less stitching and less time required.
5. Fewer drugs required
6. Quicker recoveries with less patient discomfort
7. Near zero complications
8. Less healing time

9. Delighted clients

This list is powerfully positive. I'd ask you to visualize a four-month-old Rottweiler female weighing approximately 40 pounds. Now visualize her at 14 to 16 months, full bodied and active and weighing 90 pounds. The clients don't want her to go through another heat. Which would you rather spay today?

A three-month-old female kitten's uterine horn literally jumps into the spay hook. I hear the anguish from colleagues lamenting over fat and/or the estrous engorged uterus of a one-year-old queen. Waiting seems ill considered when a 12-week surgery is within your recommendation.

No presentation about early age neutering would be complete without encouragement and discussion of the neophyte patient, i.e. 7 to 12 weeks of age. Not every practice needs to move into this special age group, however, there are organizations that need a few hospitals in their area that will provide this service. By way of example, in California, as of January 1, 2000, in counties of over 100,000 population, all shelters (public or private) and rescue groups must spay or neuter dogs and cats before adoption or collect a deposit of not less than \$40. In addition, the medically delayed animal must be neutered within 30 days. If there are no veterinary clinics in the area willing to step forward for these clients, veterinarians collectively are going to get some bad press. Conversely, the hospital that steps up to neuter neophytes will most likely have a client for life, on-going work and revenue. Everyone else will be on the sidelines. This work is a great practice builder and a public relations winner.

Be mindful of physiological and mechanical difference in the special needs for the neophytes but don't stress yourself about them. These patients need some morning food; i.e. a small feeding, about 1/2 of normal, two to three hours before surgery. Their glycogen reserves need to be replenished frequently. Offer food again about one hour after surgery. Almost always, they will eat and what a great feeling this is to see! Keep the neophytes in a thermal neutral environment. Their large body surface area compared to their core weight makes them vulnerable to temperature extremes. Don't put the patient in a cold ward, on stainless steel, or in front of air conditioning ducts. A simple terry cloth towel on the prep and surgery tables is enough to prevent heat loss, and during recovery, cover with a light towel. Don't over-wet hair with cold prep solution (evaporation cools). These are just good housing practices, simple enough to accomplish without interruption to your routine.

There are several things to expect that a you may not have experience in surgeries of older pets. Since the neophyte's oxygen consumption is two to three times greater than adults, and their sympathetic nervous system is not well developed, the young patient compensates by increased (rapid) heart rates (200+ beats per minute) and respiratory rates (15 to 35 per minute.) These are normal. I suggest that you get comfortable with kittens first (predictably easier). In some female pups the uterus can be illusive: at worst, extend incision caudally, then reflect bladder in order to see it. Some pups will have a significant amount of abdominal fluid (a normal translate), not the bladder contents, which is often first surmised.

My intention is to encourage you to see how, by moving back your recommended age for neutering cats and dogs, you can be of help to yourselves, your patients, your clients (individuals, shelters, caregivers) and local communities. For those of you who wish additional information, you can get a compilation of all works to date in the article by Lisa M How, DVM, PhD, titles "Prepubertal Gonadectomy in Dogs and Cats", Parts 1 and 2, Compendium, February

and March 1999. This is a straight forward, “easy read” article and an excellent overview of early age spay/neuter past and present.

The important thing is to believe in yourself and just get started!

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