Shelter Watch

Volume I, Issue 11 October 8, 2011

Our Mission:

We are committed to saving lives and reducing suffering of homeless dogs and cats through education, advancement of knowledge and shelter outreach.

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From the Director's Desk

We've devoted much of this issue to the topic of neutering (spaying or castrating) dogs and cats because neutering is the mainstay of shelters' measures to combat pet homelessness in the U.S.. The numbers of homeless dogs, especially puppies, has plummeted over the past 40+ years in most areas of the country, but (as you are all too well aware) we haven't made the same progress with cats! While there are lots of explanations for the dramatic decrease in homeless dogs, neutering has been a key element. So, why hasn't it worked for cats? Lots of factors contribute, including a perceived lower valuing of cats, a huge population of free-roaming sexually intact cats, an inability to reach a high enough proportion of reproducing females, and a failure to target areas (including households) that are most likely to produce kittens in the future. Unfortunately, we don't have much published data to support this last reason, but using GIS (geographic information system) analyses, we recently demonstrated that some areas in our community account for a disproportionately large number of kittens year after year. Armed with this information, the local shelter will begin to target these areas for spay/neuter (S/N), and we will help monitor the potential impact of these efforts on shelter intake. Targeted neutering will probably be more expensive in time and money, but in communities where the intake of cats has not declined over decades, despite S/N programs, we need to try new approaches. How many of you have used targeted neutering and has it lowered your intake? Write and share your experiences with us at sheltermedicine@cornell.edu.

Jan M. Scarlett, DVM, Ph.D.

Peri-operative Considerations for Pediatric Spay/Neuter:
Dr. Kate Gollon

Most humane organizations have long been comfortable with the idea of surgically sterilizing puppies and kittens. This makes sense, as there are few differences between pediatric and adult surgical protocols. The drugs used, the anesthetic practices, and the surgery itself, are all quite similar. Many of the risks of surgery for pediatrics, like hemorrhage and infection, also exist for adult animals.

The current dogma used by many humane organizations is to spay and neuter shelter animals around two months of age. Sterilizing young animals has enormous benefits for shelters in that they can advertise a younger, "finished product", both of which make animals more adoptable. Neutering at a young age also insures these animals never reproduce. Below are some special considerations to take in account when

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Peri-operative Considerations: Continued from Page 1

developing your shelter's spay/neuter protocols.

Maintain Body Temperature

Body heat is lost during surgery both through the surgical incision and via skin. The larger the surface area to body weight ratio is in a given animal, the greater amount of heat will be lost. Neonates have relatively low body weights and high surface areas, making them prime candidates for excessive heat loss. In addition, the anesthetic gas used during surgery causes depression of an animal's temperature regulating centers, resulting in hypothermia if proper precautions are not taken. Hypothermic animals (those with very low body temperature) may suffer from a variety of complications, from longer recovery times to blood clotting problems.

Maintenance of body temperature can be achieved through a variety of methods. First, the veterinarian should aim to keep incisions small, allowing less heat to escape from the abdominal cavity. It is also advisable for the surgeon to be safely efficient, as shorter surgical times lead to speedier patient recoveries. Providing a heat source like heating pads and warm water bottles during and after surgery is a must. In addition, littermates should be wrapped in blankets and placed together after surgery so they can be sources of warmth to one another.

Prevent Low Blood Sugar

Low blood sugar (hypoglycemia) is a complication that is more often seen in young animals than mature ones. This is because pediatrics do not store as many of the precursors for glucose that are needed to maintain a normal blood sugar. Hypoglycemia can lead to complications such as seizures, weakness and prolonged recoveries. There are several strategies that can be used to avoid low blood sugar in our patients. Avoiding pre-operative fasting by feeding neonates a small meal ~2 hours before surgery time will help ensure that they have an adequate glucose level entering surgery. After surgery, feed young patients as soon as they are standing. In our hands, all puppies and kittens get Karo syrup (high in sugar!) rubbed onto their gums as they are recovering.

Pediatric spay/neuter benefits everyone involved: the surgeon, the shelter, the animals and the adopters. By incorporating the strategies outlined above into their protocols, shelters will enhance the wellbeing of puppies and kittens in their care.

Pediatric spay/ neuter benefits everyone involved.

"Neutering at a young age also insures these animals never reproduce."

Could Esterilsol (Neutersol) Be Right For Your Shelter?

Dr. Mike Greenberg

Recently, Ark Sciences, LLC announced that it would begin marketing Esterilsol™ in US markets. Esterilsol™ is a non-surgical alternative to castration, and has FDA approval for use in male dogs between the ages of 3 and 10 months. Some may know Esterilsol by its "former" name -- Neutersol™.

In 2003 Neutersol became the first companion animal non-surgical sterilant to receive FDA approval. It was taken off the market in 2005 due to issues between the two companies involved in the product's marketing and manufacturing. Since that time, Ark Sciences has obtained exclusive rights to the product, and has been marketing it in Mexico and parts of Central and South America since 2008. The company recently announced that it would begin selling Esterilsol in the US -- with a particular focus on animal shelters and non-profit organizations.

How it Works

Esterisol™ is a compound consisting of zinc gluconate and arginine. After injection into the testes, it rapidly kills sperm cells, and ultimately causes shrinking and scarring of

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structures in the testicle that support sperm production (epididymis, seminiferous tubules).

In Practice
Chemical castration with Esterilsol does not require general anesthesia. Sedation and analgesia (pain relief) are recommended. Injections are performed with a 28-gauge needle. Anecdotally, those who use the product report dogs recovering within minutes following the procedure. In a pilot study of 270 beagles, 2.5% of dogs showed signs of pain upon injection[1]; however, most of the dogs in this study were not sedated.

Efficacy
Pre-pubertal dogs who have yet to produce any sperm cells are rendered sterile over the course of a few days. In sexually mature animals, testes are inactive within a few days, but some sperm are still potentially viable for 20-30 days, as is true following conventional castration[2]. Though published data are limited, Esterilsol has been shown to be 99.6% effective in rendering male dogs sterile[1].

Safety
The complication rate with Esterilsol is similar to that of conventional surgical neutering[1, 3]. However, complications have often been more severe, including severe ulceration of the scrotum, at times requiring surgical repair. These complications have been associated with accidental injection of the product subcutaneously, and injection through inflamed/infected skin. Complications can be minimized by insuring that the scrotal skin is healthy and that dogs are well-sedated before the procedure.

Cost
Ark Sciences plans to sell Esterilsol in the US beginning in January 2012. A specific cost structure has been put in place for US non-profits. Cost will be on a sliding scale based on total volume of product sold to *all* non-profits ordering the product (not based upon how much each organization buys). The price per dog, on average, will be between $15 and $5, depending upon how much of the product is sold. Essentially, if more product is sold, the price will drop to as little as $5 per dog. Based on orders thus far, the price is now $12.50 per dog.

Training and Technique
In an effort to ensure consistent handling and use of the product, Esterilsol will only be sold to licensed veterinarians who have undergone training with certified Esterilsol "Master" trainers. Following training, veterinary technicians can perform Esterilsol injections as well under the supervision of a veterinarian who has been trained.

Potential Utility
While Esterilsol's FDA label claim is for dogs 3-10 months of age, it has been used off-label for dogs as young as 8 weeks of age, and for dogs over 10 months of age. Some practitioners have reported it being particularly useful in animals that are poor candidates for general anesthesia[4]. In addition, in cases where people have had cultural or ethical aversions to surgical castration, Esterilsol has been found to be more readily accepted.

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Neutersol was the first companion animal non-surgical sterilant to receive FDA approval.

"Ark Sciences, LLC recently announced it would begin selling Esterilsol in the US with a focus on animal shelters and non-profit organizations."

For additional information, visit the Alliance for Contraception in Cats and Dogs http://www.acc-d.org/

Behavior Advice to Reduce Surrenders: The Attack Cat
Ms. Kelley Bollen, MA, CABC

Play aggression is quite common in cats.

"Barking is normal communication for dogs and we need to identify what dogs are trying to communicate if we want to reduce or stop the behavior."

Learning to read cats' body-language is key in assessing behavior.

After inappropriate elimination, which I talked about two months ago, the second most common feline behavior problem leading to relinquishment is aggression. Cats can show aggressive behavior that is scary and dangerous. There are many reasons why cats become aggressive to the humans in their lives and that human-directed aggression is the focus of this month's discussion.

A very common form of aggression exhibited towards humans is defensive aggression. Cats, like all animals, respond to fear with the flight or fight response. In the presence of a scary stimulus a cat will first try to run away but if that option is blocked then the other option is bound to occur. The main purpose of the fight response is to chase the scary thing away. The best way to help a frightened cat is to have the scary person be less intimidating and to pair their presence with something the cat really likes. If Uncle John ignores the cat instead of reaching to pet her and she is given a dish of tuna fish in his presence, things might go a little better.

Play aggression is also quite common in cats. The domestic cat is still an excellent predator and like all animals, play behavior in the young is practice for life skills needed as an adult. For this reason, play often simulates aspects of the hunt – stalk, chase and attack. Some young cats get carried away in their play and are a little too rough. This is especially true in cats that were orphaned or taken away from their mom and litter too early. Mom teaches the kittens to temper their aggression and siblings teach each other to monitor their level of play so they don't get injured. To help a cat that is overly aggressive in play I suggest play therapy. Play therapy involves engaging the cat in a few vigorous play sessions each day using appropriate cat toys. These sessions give the cat outlets to dissipate that play energy. It is also important to let the cat know that attacking a human is unacceptable by having the victim scream "ouch" and walk away from the cat.

A very misunderstood form of aggression in cats is when the cat solicits petting only to attack the petter after a few seconds. This form of aggression, appropriately termed "don't pet me any more" aggression, often stems from a low threshold for tactile stimulation. In other words, the cat likes a certain amount of petting but after a while this same stimulation becomes annoying. Cats with this problem usually give clear signals that they are becoming agitated but the average pet owner might miss them. The cat may twitch her tail or the hair on her back, her ears might go back slightly and her pupils may dilate. The best way to deal with this type of aggression is to learn and respect the cat's petting limits and to stop petting when her body language says, "that's enough".

Redirected aggression is also common in cats. This is when the cat gets agitated about one thing (another cat outside in the yard for example) and redirects those feelings onto the first individual who comes along. When I get calls about cats that attack for no apparent reason it is often a case of redirected aggression. This is a hard one to prevent so learning what an agitated cat looks like is the key. A twitching tail, rapid ear carriage changes, dilated pupils and piloerection (hair standing up) are all signs that the cat is agitated and that she should be left alone for a while.

Quick and Easy Resources for Spay/Neuter Clinic Information
Dr. Elizabeth Berliner

Effective shelter staff and veterinarians are by nature problem-solvers – they identify an issue, then ponder, collaborate, and address it in a timely and systematic fashion. Internet technology has greatly improved the breadth and depth of information available at anytime from anywhere – including the middle of the night

when one might be "surfing" for that perfect protocol or solution. I don't need to tell you that at times, the sheer amount of information can be overwhelming.

This is certainly true for protocols and procedures related to creating and implementing spay/neuter clinics. Nonetheless, one does not want to be re-inventing the wheel, especially at 3 am. Below, we try and highlight some of the best internet sites for spay/neuter clinic information, whether for administration, support staff, or veterinarians. This is by no means an exhaustive list, but do know that there are resources out there to help you create your perfect anesthetic dosing chart, or client consent form.

Organization	Website address and navigation/ What's there
ASPCApro	www.aspcapro.org/spayneuter.php
	Everything from a searchable database of s/n programs, to resources on operating a clinic, acquiring funding, and daily clinic protocols.
ASV (Association of Shelter Veterinarians)	www.sheltervet.org Go to "Task Forces and Committees," and then to "VTFASN."
	Download the medical guidelines for spay/neuter clinics. Don't miss: "Supplemental Information" section where examples of anesthetic protocols and sample clinic forms are included from members.
Humane Alliance	www.humanealliance.org/index.php Go to "NSNRT" for manuals and protocols. Go to "Vet Training," then "Instructional videos"
	Manuals, forms, and protocols for opening and operating a freestanding clinic. Don't miss: two training videos on pediatric and large dog spay techniques.
VASG (Veterinary anesthesia and analgesia support group)	www.vasg.org Easy left side navigation bar for information by drug, route of administration, or purpose.
	Extensive resources on anesthesia protocols, including local blocks and epidural administration. Don't miss: downloadable drug dose charts by kg and lbs, with dilutions of most popular injectables; drug calculators for your computer and PDA; photos of procedures.
VIN (Veterinary Information Network – members only)	www.vin.org Go to "Library," then "Specialty Centers"
	Although message boards are easily searchable, the "anesthesia" and "shelter medicine" specialty boards are especially relevant. Don't miss: the various "forms" collections under the specialty boards, practice management, and client education.

Health Benefits of Spaying and Neutering: Dr. Nicole Putney

Although we in the shelter community are all too aware of the high numbers of homeless pets the importance of spay/neuter efforts to control it, the general public is often less aware of this problem. As the 2009 PetSmart Charities survey titled "Motivators and Barriers to Pet Adoption and Spay/Neuter" illustrated, only 29% of respondents claimed to be "familiar" with pet overpopulation. And although 35% were "concerned" about pet overpopulation, it ranked last amongst several other social concerns such as global warming and

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Health Benefits of Spaying and Neutering (Continued from Page 5)

poverty. The number of animals euthanized annually in U.S. shelters (currently estimated to be 4 million) was also grossly underestimated by the majority of individuals polled: 76% of those surveyed estimated that 1 million or fewer cats and dogs are euthanized in shelters annually.

While we tend to think on a large scale, encompassing the millions of homeless pets in the U.S., the average pet owner/guardian often simply wants what is best for their individual pet. Therefore, when speaking to the general public about spaying and neutering their pets, sometimes the best approach is to focus on the positive effects on their individual pet's *health* as a result of spaying and neutering. Spaying and neutering have positive effects both immediately and also long-term for pets. These include:

For females, spaying:
-dramatically decreases the chances of developing mammary cancer if spayed before the first heat cycle (female dogs and cats do ***not*** benefit from having a heat cycle or litter before being spayed).
-dramatically decreases the risk of pyometra, a life-threatening infection of the uterus, which is very uncommon in spayed females, but a common problem in older, intact females.
-removes having to manage females in heat.
-eliminates the risk of ovarian or uterine cancer.

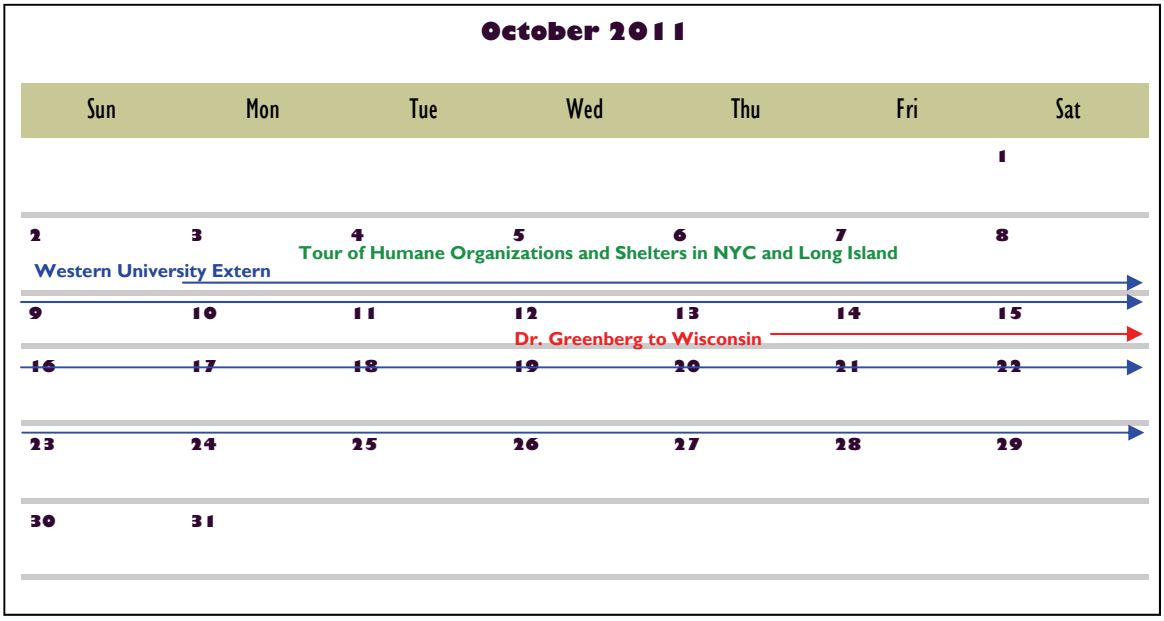
For males, neutering:
-can decrease roaming behavior, which often leads to vehicular trauma and/or unwanted litters.
-dramatically decreases chances of prostatic enlargement, which is very common in older intact dogs and often leads to problems defecating and urinating.
-can decrease aggressive behavior.
-eliminates the risk of testicular cancer.

For both females and males,
-removing gender-specific sex hormones can result in fewer behavioral issues (vocalization, roaming and aggression [males])

And of course, spayed and neutered animals are no longer able to contribute to the overwhelming number of unwanted litters entering shelters each year. Pet owners also tend to take more pride in their spayed or neutered pet, since they have made an important investment in and commitment to their pet's health. Perhaps this will make them less likely to relinquish their pets, which is yet a further contribution of spay/neuter to ending pet homelessness.

More information on PetSmart Charities and research results regarding attitudes towards spay/neuter and pet overpopulation can be found at http://www.petsmartcharities.org/resources/adoption-spay-neuter-barriers-research.html

Events Calendar



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Maddie's® Shelter Medicine Program is underwritten by a grant from Maddie's Fund®, The Pet Rescue Foundation (www.maddiesfund.org), helping to fund the creation of a no-kill nation.