

SESSION OVERVIEW

Dr. John Verstegen

Session presenters were Dr. John Verstegen, Dr. Deborah Duffy, Dr. Karine Verstegen-Onclin, Dr. Iris Reichler and Dr. Vic Spain (see separate documents for individual presenters' materials).

Although the total number of dogs and cats humanely killed annually in the United States has decreased significantly over the last 20 years, the numbers are still in the millions. Accurate national shelter data does not exist, but estimates suggest that between 5 and 11 million (possibly even more) dogs and cats are handled annually by approximately 5,000 shelters. Around 50% are euthanized, 15% are reclaimed by their owners, and the rest are adopted.

Spay and neuter is widely accepted as the solution to pet overpopulation and population control. In veterinary colleges with shelter medicine specialties, spay/neuter is presented as the contraceptive technique of choice. In many veterinary colleges, this is often the only contraceptive approach taught to veterinary students.

Surgical sterilization indeed has some clear advantages: It is irreversible, is relatively easy to perform, is well introduced across the country, and is generally accepted. However, the technique also has some limitations: Surgical sterilization can be expensive; there are risks of surgery and anesthesia; there can be side effects and pain; the procedure requires an infrastructure and specialized knowledge; and it is not appropriate in all situations. Further, although spay/neuter has been widely used for more than 20 years, the generally marvelous reproductive efficiency of cats and dogs has been such that the homeless pet problem remains an acute societal, individual and ethical problem.

The ideal contraceptive approach (as stated by Brown and Moskowitz years ago, and taken from Berelson in 1964) should be long-acting or irreversible, highly effective, and safe; it should produce few or no side effects; it should require limited or no need for significant action to be applied; and it should necessitate no continuing supplies and be low cost.

The objectives of the first session were to look closely at surgical sterilization in this context. Does spay/neuter meet these requirements noted above? It is important to understand the “gold standard” in order to have a benchmark against which non-surgical approaches can be compared.

Dr. Duffy presented results from a large epidemiological study that called into question generally held beliefs about the effects of spaying on dogs' behavior. The results of that study suggested that spayed female dogs of some breeds tend to be more aggressive

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toward humans than intact females. The effects of castration on behavior, particularly aggressive behavior, were clearly questioned, indicating a need for further studies.

Dr. Verstegen-Onclin presented preliminary data concerning the possible relation between early spaying and abnormal external genital development leading to chronic vestibule-vaginal infection and UTI. Since early-age spaying is a relatively recent approach to population control in carnivores, long-term data are unavailable and recent data are now slowly accumulating, allowing detection of side effects not observed or not taken into consideration in the previously published studies. Even if preliminary, these observations present new questions and deserve further investigation.

Dr. Reichler summarized the results accumulated over 10 years in her laboratory showing the relation between spaying and urinary incontinence, a common side effect with poorly understood pathogeny in the spayed dog. Directly or indirectly, through GnRH and the gonadotrophins, acting at the periphery or centrally, the reproductive axis seems to be involved in the regulation of continence.

Dr. Spain, who has been recently involved in many studies assessing the long-term risks and benefits of early-age neutering, presented convincing data about the effects of spay/neuter on hip dysplasia, cranial cruciate ligament rupture, long bone development, body weight, diabetes, urinary tract infections, mammary cancer, and several other conditions. Like the preliminary study of Dr Verstegen-Onclin, Dr. Spain advises delaying sterilization of females until after four months of age.

The main interest of this session was to take an objective and careful look at the non-reproductive effects of spay/neuter. Looking for alternatives, we have been too often caught up by insisting on an ideal drug or technique that would be without side effects, bias or pitfalls. In reality, there is not likely to be one “magic treatment” that can instantly, inexpensively and permanently sterilize a male or female cat or dog with no risk of undesired effects.

At this stage, spay/neuter still remains the only acceptable standard to control population in dogs and cats, but this “gold standard” is probably not as efficacious, safe or devoid of side effects as generally considered. The presence of unwanted side effects or problems related to surgical spay/neuter allows us to compare the value of this reference and to consider the development of new alternatives with more realism.