26 dogs, 10 were included in the NSM group and 16 were in the CM group. When the CRP concentrations from the 6- to 13-day follow-up were compared between these 2 groups, the levels in the NSM group were significantly lower (0.26 ± 0.23 mg/dl) than those in the CM group (1.86 ± 1.69 mg/dl). In addition, at this 6-month period, dogs that had had elevated CRP levels (> 1 mg/dl) at the 6- to 13-day follow-up showed poor disease prognosis and needed medication more frequently than those that had had normal CRP levels (< 1 mg/dl). This finding suggests that the initial CRP responses of IPA dogs after initiating treatment might serve as a useful index for predicting the outcome. Further studies using a larger sample size are needed to confirm these conclusions.

COMMENTARY: C-reactive protein is a nonspecific inflammatory biomarker that is increasingly being used in human medicine as a predictive factor for cardiovascular events and the prognosis and recurrence of disease, and as a measurable response to antiinflammatory therapy. Similar testing and monitoring applications are undoubtedly applicable to veterinary medicine. As this paper illustrates, we should see much more information emerge in the near future on the utility and correlation of measuring and monitoring CRP levels in veterinary patients.—Bess J. Pierce, MZS, DVM, Diplomate ABVP & ACVIM


Urethral Closure After Canine Ovariectomy

Urethral sphincter mechanism incompetence (USMI) is the most common cause of urinary incontinence in dogs. It occurs primarily in spayed females while they are sleeping or recumbent and profoundly relaxed. The condition affects an estimated 11% to 20% of spayed dogs, particularly large-breed individuals weighing more than 20 kg. To determine whether urethral function deteriorated after ovariectomy, a series of simultaneous urethral pressure profiles were performed on each of 10 dogs 2 weeks before and then 3, 6, and 18 months after ovariectomy. The variables measured included maximum urethral closure pressure (MUCP), functional urethral length, site of maximum urethra closure pressure, and area under the urethral pressure profile (expressed as total, cranial, middle, and caudal integrated pressures). After 18 months, MUCP and functional urethral length had both decreased, which could be partly explained by a deficiency of urethral smooth muscle activity. The site of the MUCP moved caudally along the functional urethral length during this time as well, possibly because of a loss of midurethral tone. The total integrated pressure, cranial integrated pressure, and middle integrated pressure all decreased significantly after 18 months. Caudal integrated pressure decreased initially; then increased after 18 months, possibly reflecting compensation of the striated muscle in the caudal third of the urethra for smooth muscle atrophy. None of the 10 dogs in this study showed clinical evidence of USMI; however, the results confirm that the urethral closure mechanism in dogs deteriorates gradually after ovariectomy. This study may help improve understanding of the urethral mechanisms that lead to USMI after ovariectomy.

COMMENTARY: This well-standardized and unusually long-term study (18 months) documents changes in the length and tone of the urethra after ovariectomy, measured by urethral pressure profilometry. The study confirms that smooth muscle sphincter tone is reduced in the cranial and middle sections of the urethra, while the contribution of the striated skeletal muscle in the caudal urethra was maintained and even appeared to increase in tone between 6 and 18 months after surgery. Unfortunately, the study did not include an unoperated, intact group to separate the effects of aging from the effects of ovariectomy.—David F. Senior, BVSc, Diplomate ACVIM & ECVIM-CA