ABSTRACTS

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Incidence of urinary incontinence in spayed bitches at the Veterinary Teaching Hospital of the University Anhembi-Morumbi in São Paulo, Brazil

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OBJECTIVES and METHODS: Post-Castration Urinary Incontinence (PCUI), defined as the involuntary loss of urine during the filling phase of the bladder, is a condition which has been diagnosed with increasing frequency in gonadectomized bitches during the second half of the last century. The widespread use of castration as a mean of controlling the canine population has been demonstrated to be the causative factor of this condition whose incidence is very low in intact bitches (0-1%) (1) while it may reach 10-20% in neutered bitches (2). In 75% of affected bitches, clinical signs occur during the first 3 years after surgery, with higher incidence in large size dogs(2). The lack of estrogen in castrated bitches causing a weakness (or incompetence) of the urethral sphincter is a key pathogenetic mechanism (3, 4) although it is not the only one as daily supplementation of estrogen results in a maximum of 65% efficacy in treating bitches suffering from PCUI (2, 5).

Canine PCUI has been studied mostly in Europe, North America and Australia, while no data is available about incidence of this condition in South American countries. This study was undertaken in order to gather information about the incidence of urinary incontinence in the State of São Paulo, Brazil. The medical records of bitches spayed at the Veterinary Teaching Hospital (VTH) of the University Anhembi-Morumbi (São Paulo, Brazil), from 2002 to 2009 were searched between August 2010 and March 2011, and owners of bitches undergoing castration during the 2002-2009 period were contacted via telephone to inquire about incidence of PCUI. A brief questionnaire was administered via telephone, which included questions on post-castration health and presence of signs of urinary incontinence. At the VTH of the University Anhembi-Morumbi castration is normally performed by ovariohysterectomy through a midline approach.

RESULTS: A total of 654 records of bitches castrated during the period 2002-2009 were identified. The mean age at which gonadectomy was performed in these bitches (generally for mammary tumors or pyometra) was 4.4± 0.7 years. Only for 227/654 records owners could be found and interviewed. 73/227 bitches had died without any clinical sign of PCUI after a mean time of 2.93±1.73 years, and 146 owners reported that their bitches did not show any sign of urinary incontinence after a mean time of 3.9±2.0 years following castration. PCUI was reported in 8 bitches after a mean time of 3.8±1.60 years following castration. Of these, 4 were mixed breed, 1 was an Irish Setter, two were Fox Terriers and one was a Poodle. Only two of them (the Poodle and one mongrel) had been castrated before puberty. The owners of these 8 bitches had not associated urinary incontinence with castration, and had not treated their animals because they thought that the condition was not treatable. None of the bitches spayed in the years 2008 and 2009 had developed signs of urinary incontinence by the time this survey was completed in March 2011.

CONCLUSIONS: The incidence of PCUI of 3.5% observed in our study is lower than the 20% reported by Arnold (2). Such a difference may be due to the fact that our sample was not large enough, and/or that perhaps breeds with lower risk of PCUI were overly represented in our population. It should be underlined that 73/227 bitches died without showing any clinical signs of PCUI after 2.93±1.73 years: as 75% of the cases of PCUI occur during the first 3 years post-surgery (2), the short lifespan of bitches in our study might have made it impossible to observe incidence of the remaining 25% of cases of PCUI occurring after the first 3 years post-surgery. The reported average of the interval between castration and appearance of urinary incontinence of 3 years is in agreement with the findings of our study, since we had no report of PCUI in bitches spayed in the years 2008 and 2009, but only in bitches spayed in previous years.

This is the first report detailing incidence of urinary incontinence as a side effect of castration of bitches in South America. As the main policy of canine population control in Brazil is gonadectomy, owners of bitches being neutered should be informed about the possibility of PCUIs a side effect, and instructed about treatments to be instituted in such cases. Post-castration urinary incontinence can be treated: Estriol and phenylpropanolamine-based products have a reported efficacy of 65 and 75%, respectively (2, 6). Also, other drugs such as deslorelin implants are currently being studied (7). Our survey indicates that in Brazil there is a need to increase awareness of this clinical condition both among veterinarians as well as dog owners.


(6) Richter KP, Ling GV – Clinical response and urethral pressure profile changes after phenylpropanolamine in dogs with primary sphincter incompetence. JAVMA 187: 605-611, 1985