ABSTRACTS

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DIAGNOSIS OF ENDOMETRITIS IN THE INFERTILE BITCH: A NEW APPROACH

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Introduction - Very few reports have been made about endometritis in the bitch; its relationship with failure to conceive remains unclear. It may be due to the difficulty to collect uterine samples for further investigations. Today, transcervical catheterization by vaginal endoscopy allows us to evaluate the endometrium in infertile bitches. Diagnosis criteria were determined according to previous studies on uterine cytology and bacteriology[1-3]. The aim of our study was to test the efficiency of this technique to diagnose endometritis in the bitch and furthermore, to evaluate the incidence of endometritis within infertile bitches.

Material and methods - 26 bitches presented for infertility in Alfort Veterinary College were included in this study. Classical infertility investigations were not indicative: time of mating had been correctly determined by progesterone assays, male used had sired successfully, clinical examination and genital ultrasonography revealed no abnormalities. A vaginal endoscopy was performed and presence of vaginitis and cervical discharge was evaluated. In all bitches, a transcervical catheterization was performed using a human ureteral catheter (Ureteral CRU® ch.6 223602). Flushing of the uterine lumen was realized with sterile saline fluid (NaCl 0.9%, 2mL/10 kg instilled then reabsorbed) and collected samples were used for uterine cytology and aerobic bacteriology (Amies agar gel with charcoal).

The normal leucocyte score, which reflected absolute and relative numbers of leucocytes versus endometrial cells, was defined by Watts [3]. All cytologies exceeding normal scores were considered as endometritis.

If cytology pointed out an inflammatory state correlated to bacterial heavy growth, the bitch was considered to suffer from infectious endometritis. A cytologic inflammatory state of the uterus in the absence of bacterial growth was considered to be a non infectious endometritis.

Results - Fourteen different breeds were concerned, from Shi-Tsu (5kg) to Mastiff (96kg). Bitches were mainly large and giant breeds and were aged 1 to 7 years (mean 4 years/SD=1.5). Uterine investigations were realized in dioestrus (21 bitches), anoestrus (4) and pro-oestrus (1). 10/26 bitches suffered from endometritis. Among them, seven suffered from infectious endometritis. Three bitches had a bacterial heavy growth without cytologic abnormalities and we considered that it was a sign of contamination by the normal vaginal flora. In 4/10 bitches suffering from endometritis, a cervical discharge was observed by vaginal endoscopy. Surprisingly, another bitch negative towards cytological and bacteriological criteria was found to show also a purulent cervical discharge. A clear cervical inflammation was also observed in 3/7 bitches suffering from infectious endometritis. Signs of vaginitis were visualised in two bitches, both of them suffering from infectious (1/10) and non infectious (1/10) endometritis. One bitch suffering from infectious endometritis presented signs of vaginitis, cervicitis and cervical discharge. Infectious endometritis was diagnosed during dioestrus (6/7) and prooestrus (1/7). Non infectious endometritis was diagnosed in dioestrus (2/3) and anoestrus (1/3). Four bitches for which endoscopy was performed in dioestrus encountered pyometra after flushing, two of which were not initially suffering from endometritis. Five bitches suffering from endometritis were further bred after treatment combining antibiotics +/- aglepristone (Alizine®) and they all went pregnant. 4/5 bitches whelped normally and 1/5 had a premature parturition at 59 days of pregnancy.
Discussion - In our study, endometritis seemed to have in most cases an infectious origin (70% of affected bitches), but these results may be underestimated, as some other pathogens (anaerobic bacteria, mycoplasms, fungi), were not searched for. Dioestrus seems to be the best period to diagnose endometritis. However, the endometrium impregnated with progesterone is more sensitive and despite all precautions, this could explain that we got induced pyometra after endoscopy. Early anoestrus may be a more adequate period to perform those investigations, as progesterone impregnation is over. One bitch showed a purulent cervical discharge without a positive endometrial cytology. Our diagnosis technique lacks comparison with histology, which should be done to ensure a more accurate diagnosis. Indeed, impact of endometritis is underestimated. Endometritis, in our opinion, should be investigated in each unexplained case of infertility in bitches. The technic used here seems reliable: all bitches treated were bred successfully whereas previous infertility treatments had not succeeded. Defining more accurate criteria will improve the efficiency of this non invasive technique that could help to treat unexplained infertility cases.

References