ABSTRACTS

6th International Symposium on Canine and Feline Reproduction

&

6th Biennial EVSSAR Congress

European Veterinary Society for Small Animal Reproduction

"Reproductive biology and medicine of domestic and exotic carnivores"

University of Veterinary Sciences
9th – 11th July 2008
Vienna, Austria

Editors: G. England, P. Concannon, S. Schäfer-Somi

Reprinted in IVIS with the permission of the Symposium Organizers
NO DETECTION OF CHLAMYDIAE FROM THE GENITAL MUCOSA OF HEALTHY DOGS OR DOGS WITH REPRODUCTIVE DISTURBANCES IN SWEDEN

Ström Holst B, Hanås S, Bölkske G, Linde Forsberg C
National Veterinary Institute (SVA), Uppsala and Swedish University of Agricultural Sciences (SLU), Faculty of Veterinary Medicine and Animal Health, Department of Clinical Sciences, Box 7054, 750 07 Uppsala, Sweden. Bodil.Strom-Holst@kv.slu.se

Introduction - Bacteria belonging to the family Chlamydiaceae cause a broad spectrum of disease in a wide range of hosts, including man, other mammals, and birds. Reproductive disturbances are common, among them salpingitis and infertility in man, genitourinary disease in koalas and abortion in sheep and cattle. There is also circumstantial evidence for a role of Chlamydiaceae in reproductive disturbances in cats. Chlamydiae can be isolated from the vagina of cats after ocular infections, and occasionally also in cats without previous ocular disease. Very little is known regarding the potential of Chlamydiaceae to cause disease in dogs. Prostatitis has been induced experimentally (7), but hitherto no natural prostatic infections caused by Chlamydophila have been reported. Experimental infection causing hepatitis has been described (10). Chlamydia was thought to play a role in septic polyarthritis in a dog, but the organism could not be cultured (6). The organism could, however, be isolated from another dog with pyrexia and shifting leg lameness (1). A case of follicular keratoconjunctivitis caused by Chlamydophila abortus has been described (3). The role of chlamydiaceae in genital disease in dogs has previously not been studied. Other aetiological agents, such as canine herpes virus or extracellular aerobic bacteria, that are known to have the capacity of causing genital disease and reproductive problems in dogs, are searched for more frequently. Detection of chlamydiaceae requires special cultivation techniques, or analysis with PCR, and therefore samples for analysis of these bacteria are seldom taken in clinical cases of genital disease or reproductive disturbances. We have developed a real-time PCR that is specific for the family Chlamydiaceae (2). This PCR has an internal control to monitor any inhibition from the sample material. Such a broad PCR, detecting all the members of the family Chlamydiaceae (including e.g. Chlamydophila abortus, Chlamydophila psittaci, Chlamydophila felis, Chlamydophila pneumoniae, Chlamydophila pecorum and Chlamydia trachomatis), is advantageous for epidemiological studies, especially when aiming at studying the possible presence of an unknown genus of chlamydiaceae in a species.

Objectives - The aim of the present study was to study if members of the family chlamydiaceae can be detected on the mucosae of healthy dogs or from dogs with reproductive disturbances or genital disease.

Materials and methods - Forty-nine privately own dogs of various breeds, 35 females and 14 males, were included in the study. They were categorized as clinically healthy (N=21), or with clinical symptoms from the genital tract (N=22). Few dogs (N=6) with ocular signs (conjunctivitis) were also sampled. Signs from the genital tract included vaginal discharge (N=5), endometritis (N=9), pyometra (N=4) and a mixed group (poor semen quality, failure to conceive, prostatic disease etc). The dogs were sampled with cotton tipped swabs without any transport or culture medium. From each dog, samples were taken from the conjunctiva, oropharynx, rectum and genital tract (vagina or preputium) by rolling swabs against the mucosa. From male dogs, swabs were also dipped in semen samples, when available (N=5). The samples were transported dry to the laboratory (National Veterinary Institute). At the lab,
they were analysed for the presence of *Chlamydiaceae* using a real-time PCR with internal control (2).

**Results** - All samples were negative for *Chlamydiaceae*. *Chlamyphila abortus* has been detected in faecal samples of 24% (13/55 samples) of Italian dogs (Greco et al 2006), and *Chlamydophila psittaci* has been detected in 75% (12/16) of samples from dogs with conjunctivitis in Poland (8). In Sweden, the only *Chlamyphila* species diagnosed in cows is *Chlamyphila pecorum*, with a low prevalence (4). The prevalence of *Chlamyphila psittaci* in faeces of passerine birds in Sweden is around 3% (9/312, 9). In conclusion, no presence of *Chlamydiaceae* was detected from dogs in the present study. The results suggest that the prevalence of *Chlamydiaceae* in dogs is related to infection from other species, and that dogs in general do not harbour *Chlamydiaceae* on their mucosa. *Chlamydiaceae* do not seem to be of importance for genital disease in Swedish dogs.

**References**