Proceedings of the 8th International Symposium on Canine and Feline Reproduction
ISCFR

June 22-25, 2016
Paris, France

In a joint meeting with the XIX EVSSAR Congress

Reprinted in IVIS with the permission of the ISCFR Organizers
A retrospective clinical study of endoscopic-assisted transcervical insemination in the bitch with frozen-thawed dog semen

Mason, Stuart J
Monash Veterinary Clinic, 1662 Dandenong Rd Oakleigh East, Victoria, AUSTRALIA, 3166
drstuartmason@gmail.com

Since the conclusion of data collation from a previous study by the author[1], a further 352 inseminations using frozen thawed dog semen by endoscope assisted-transcervical insemination (EIU) have been performed by the author. All inseminations were performed on healthy bitches, with semen being obtained from multiple dogs and collections. All bitches were inseminated once during an oestrous cycle. Insemination was performed on the first day in which maximal crenulation of the anterior vagina was detected[2] in conjunction with a progesterone concentration of >10 ng/mL confirming ovulation was complete[2]. All semen samples were analysed for total number of sperm, total motility and progressive motility using CASA (Spermvision SAR®, MOFA Global, Verona, USA). The insemination dose was based on the progressive motility of the semen. Morphology assessments were not formally performed for each insemination, with the assumption that progressively motile sperm are normal unless there are large numbers of cytoplasmic droplets or spermatozoa head defects noted on gross examination. Insemination was performed on all bitches as previously described[1] using a ureterorenoscope (Karl Storz, Tuttlingen, Germany). Insufflation of the vagina was achieved using a rectal insufflation bulb (30200 WelchAllyn, Skaneatele, NY) and a CH-5 TCI catheter (MOFA Global; Verona, USA) was passed through the cervix into the uterine body. Additional extender (AndroPRO AI, MOFA Global; Verona, USA) was inseminated subsequent to the semen to expand and fill the uterus. The semen and additional extender was inseminated slowly over a period of 15-20 minutes. Pregnancy was determined by B-mode ultrasound equipped with a 7.5 MHz probe (MyLab 30VetGold, The Esaote Group, Genova, Italy) while standing or via the whelping rate. The number of sperm inseminated ranged from 9 x 10⁶ progressively motile spermatozoa (PMS) to 519 x 10⁶ PMS, with progressive motility values ranging between 20 and 80%. The overall pregnancy rate was 68% (238/352). When over 150 x 10⁶ PMS were inseminated the pregnancy rate was 76% (110/145), when 100-150 x 10⁶ PMS were inseminated 68% (87/128), and when less than 100 x 10⁶ PMS the pregnancy rate was 52% (41/79). Pregnancy rate was significantly higher when greater than 150 x 10⁶ PMS (p = 0.003) or 100-150 x 10⁶ PMS (p = 0.027) were inseminated compared to under 100 x 10⁶ PMS. Nine of 238 pregnant bitches underwent confirmed resorption (early embryonic death). These results support the use of EIU in the insemination of bitches using frozen-thawed dog semen in a clinical setting. Further to this, these results support previous reports recommending the insemination of over 150 x 10⁶ PMS to maximise pregnancy rate[3]. In contrast to other publications recommending two inseminations of 150 x 10⁶ PMS, these results indicate that similar pregnancy rates may be obtained with one insemination via EIU.

[3] Linde-Forsberg C. Fertility data from 2041 controlled artificial inseminations in dogs. Advances in dog, cat and exotic carnivore reproduction book of abstracts, Oslo Norway 29 June – 1 July 2000; p. 120