ABSTRACTS

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SCHEDULED CAESAREAN-SECTIONS IN THE BITCH USING AGLEPRISTONE AND TAKING INTO ACCOUNT THE DATE OF OVULATION: A NEW APPROACH

X. Levy¹, E. Fontaine¹, A. Grellet¹, V. Segalini¹, A. Fontbonne¹
¹CERCA, ENVA, 7 av. General de Gaulle, 94 700 Maisons-Alfort Paris, France.
E-mail: vetlevy@yahoo.fr

Objective of the work. 66% of bitches suffering from dystocia are treated by Caesarean sections (CS) (1). The likelihood of all foetuses remaining alive is increased if the CS is not performed in emergency (4). Recently, some authors described rationale criteria in pregnant bitches to define the events leading to an elective CS: single pup syndrome, pelvis fracture, metabolic disorders, vaginal strictures, hydrocephalus, previous C-section … (3). So far, most veterinarians don’t schedule C-section precisely, but they wait until the first signs of parturition (often at night) or until the progesterone blood level falls under 2 ng/mL. The aim of this study was to try to schedule C-section before the pre-partum decrease of progesterone and to evaluate the innocuity of this procedure for the dam and her puppies.

Materials and methods. 36 bitches were included in our study: 12 English Bulldogs, 6 French Bulldogs, 6 Beagles, and 12 other purebred bitches (5 weights over 40 kg, 4 between 20 and 40 kg and 3 less than 20 kg). All bitches, except Beagles, were brought for elective C-sections: five bitches were pregnant with one single pup, one had a history of a primary uterine inertia, one suffered from a severe stenosis at the vestibule-vaginal junction (a resection of a stage 4 vaginal fold hyperplasia was performed at mid-gestation) and the others underwent previous CS for various other reasons (in English Bulldogs, some owners asked for planned CS). Beagle bitches were included in an experimental protocol in which a C-section was needed. Bitches were monitored during their heats and the day of ovulation was determined by progesterone quantitative assays (± 6 ng/mL, Chemiluminescence assay, Progesterone II®, Elecsys 2010, Roche Diagnostics, Germany) (6). 60 days after the estimated date of ovulation, all bitches received an injection of aglepristone (Alizine®, 15 mg/kg SC) according to the protocol suggested to induce parturition (2). CS were performed 61 days after ovulation. The vitality of the foetuses was assessed by a transabdominal ultrasonography (ATL, HDI®, 7.5 MHz probes) performed before surgery. Progesterone assays were performed to confirm that the pre-partum drop had not yet occurred. All the puppies were monitored during the first 48 hours.

Results. Progesterone remained above 2 ng/ml at the time of C-sections (mean=5.25, SD=1.28). No post-operative clinical complications were reported in any of the bitches. All the bitches were able to nurse and feed their puppies in the first hours following surgery. 4 out of 181 puppies died in the first 48 hours (2.2%) belonging to different bitches. No neonate showed any signs of prematurity and they were all vigorous.

Discussion and Conclusion. The determination of the ovulation date helps estimating the parturition date (63±1 day) (6, personal data). This criterion helps to avoid to perform a C-sections too early, and also to avoid getting premature puppies and high death rates. In our study, the survival rate of the neonates (2.2%) was not affected by the time of the C-sections and was in agreement with other studies (8%) (4). Even if we should keep in mind the importance to genetically select bitches able to whelp naturally, our study is the first to show that a C-section may be performed in average 2 days before the date of expected parturition, without any harmful consequence for the dam and her neonates. This has been demonstrated also in the case of induced parturition (2). However, the interest of using Alizine® to avoid prematurity cannot be confirmed by our study. This new approach may reveal to be very
useful for owners and veterinarians in some pathological conditions (pelvis fracture, single pup syndrome, metabolic disorders …) (3).

References