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Temperature of bitches after parturition measured by ingestible loggers
Laura S.-Ch. Schulze, Wolfgang Heuwieser and Sebastian P. Arlt
Clinic for Animal Reproduction, Freie Universität Berlin, Berlin, Germany
sebastian.arlt@fu-berlin.de

The first days after parturition are characterized by many claims raised by nursing the puppies, uterine involution, milk production and hormonal changes. Information about physiological body temperature in puerperal bitches, however, is controversial. Some authors consider higher temperatures in the first days after parturition to be normal [1]. Other authors regard an elevation of body temperature over 39.5°C to be a sign for mastitis, metritis or hypocalcaemia [2]. The objective of this study was to identify the physiological ranges of body temperature of bitches in the first 7 days after parturition by measurement with an ingestible temperature logger. This method enables the collection of continuous data with a reduced potential bias due to the handling of animals and less yielding of stress. The study was performed with 20 private-owned bitches of different breeds. During each experiment, the bitch swallowed one temperature logger (ANIPILL, BodyCap, Hérouville Saint-Clair, France) every day for 7 days. The first logger was swallowed within a few hours after birth of the last puppy. Core body temperature was measured every 15 minutes, stored by the loggers and also sent telemetrically to a monitor. On day 3 and 7 after parturition, we collected blood samples. Bitches were defined to be healthy if the total count of leucocytes was not higher than 12.0 x 1000/μl. Eight out of 20 bitches were defined as healthy in the first 3 days after parturition. The other animals had to be excluded because of a C-section (n = 5), leucocytosis (n = 5), drug administration (n = 1) and mastitis (n = 1). Only three out of 20 bitches fulfilled the health criteria in the first 7 days. Mean body temperatures of healthy bitches were (mean ± SD) 38.9°C ± 0.40 on day 0 p.p. (end of birth until end of day of parturition), 38.9°C ± 0.44 on day 1 p.p., 38.9°C ± 0.35 on day 2 p.p., 38.7°C ± 0.31 on day 3 p.p., 38.8°C ± 0.30 on day 4 p.p., 38.6°C ± 0.35 on day 5 p.p., 38.5°C ± 0.27 on day 6 p.p. and 38.4°C ± 0.34 on day 7 p.p, respectively. Within the first three days 3 out of the 8 healthy bitches showed temperatures above 39.5°C. Some authors describe physiological body temperature in dogs to be 38.7°C ± 0.45 [3]. We conclude that the physiological ranges of body temperature of bitches in the first days after parturition do not differ from those of healthy dogs in general, while the appearance of short episodes of febrile temperatures seem to be physiological.