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Successful pregnancy and concomitant suspected luteal insufficiency following gonadotrophin-releasing hormone analogue therapy in a previously infertile bitch

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A 6-year-old, 32.8 kg body weight, sexually intact Deutschkurzhaar bitch was presented with a history of repeated unsuccessful breedings during the last several heats. The bitch had given birth to live 6 puppies about two years ago. According to the owner the bitch was in heat 5 months ago which had lasted about 3.5 weeks and again 14 days later that lasted about 5 weeks. Serum progesterone (P4) concentration has been between 0.3-0.8 ng/ml and never exceeded 1 ng/ml. During the last heat she was naturally bred on days 20 and 22 twice by a male which was proven to be fertile on various occasions but no pregnancy resulted. The bitch was presented to our clinic on the 8th day after the onset of proestral bleeding. She was closely monitored through serial examinations including vaginoscopy, vaginal cytology, ovarian ultrasonography and serum P4 measurements. Buserelin (Receptal®, MSD Animal health, Vienna, Austria) was administered subcutaneously at a dosage of 0.12 mg/kg (0.03 ml/kg) on days 17 and 20 when serum P4 concentrations were 0.7 and 1.0 ng/ml, respectively. The luteinizing hormone (LH) peak and ovulation are believed to occur on days 22 and 24, respectively. The bitch mated two times on days 25 and 27 days and pregnancy was confirmed by ultrasonography on day 30 after mating. Due to the history of infertility serum P4 concentration and the fetal viability were monitored twice weekly until delivery. The bitch was supplemented with allyltrenbolone (Regumate® Equine, MSD) at a dosage of 0.088 mg/kg sid between days 50 and 59 after ovulation because of a low serum P4 concentration (5.9 ng/ml) on day 49 after ovulation. The bitch delivered 6 live puppies on day 62 after ovulation. There was no change in her lactation after allyltrenbolone treatment. The reproductive history of the bitch presented here led us to suspect from a case of ovulation failure because of showing a serum P4 level less than 1 ng/ml during the last heat and a short inter-estrus interval between the last two estruses. In a previous case report abnormal LH fluctuations have been identified in a Labrador bitch that became pregnant after two intramuscular injections of fertirelin acetate at a dosage of 50 mcg/kg with 6 hours interval. In the case presented here LH pattern could not be monitored due to financial constraints. Therefore it is not possible to exclude the fact that the bitch might have been a late ovulatory one and thus ovulation might not have been induced by buserelin. On the other hand serum P4 concentration was found to be low for 4 weeks of pregnancy when viable fetuses were confirmed on ultrasonography. The bitch was successfully treated with allyltrenbolone without causing any congenital malformations on the fetuses or agalactia.

