

Application of the antiprogestin Aglepristone for conservative treatment of pyometra in the dog

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For conservative treatment of pyometra 31 bitches were treated s. C. With the antiprogestin RU 46534 (Aglepristone) in a dose of 10 mg/kg bw on days 1, 2 and 7 and, one dog only, also on day 14. When presented all dogs showed either increased white blood cell counts and/or elevated body temperatures and hence additional treatment with an antibioticum was initiated. The course of illness was controlled by repeated clinical, sonographical, hormone-analytical and laboratory diagnostical examinations until four weeks after onset of treatment. Treatment proved to be successful in bitches with progesterone >3.2 nmol/l on the day of presentation and undisturbed ovarian function (group A; n = 21); a rapid general improvement and normalisation of feed and water intake was paralleled by an increased vulval discharge which led to the disappearance of a sonographically detectable uterine lumen within the observation period. The laboratory parameters showed a high variation with average values, however, staying in the normal range. A significant decrease was observed for total white blood cells, neutrophilic granulocytes, alkaline phosphatase and blood urea. Treatment did not affect cortisol levels and mammary gland development. During a mean observation period of 14 months one of the successfully treated bitches exhibited a recurrence of pyometra. Most other bitches exhibited normal cyclicity and two bitches were successfully bred. With the exception of one dog treatment was not successful in dogs with progesterone levels <3.2 nmol/l on the day of presentation (group D). The four dogs of group B, in which treatment was unsuccessful in spite of progesterone levels >3.2 nmol/l, showed ovarian cysts. These studies allow the conclusion that conservative treatment of pyometra with an antiprogestin is indicated in dogs showing normal ovarian function and being in the state of dioestrus (progesterone >3.2 nmol/l). Side effects were not observed.

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Aus der Klinik für Geburtshilfe, Gynäkologie und Andrologie
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Justus-Liebig-Universität Gießen

**Untersuchungen zur konservativen
Pyometrabehandlung der Hündin mittels
eines Antigestagens im Rahmen einer
offenen klinischen Studie**

Inaugural-Dissertation zur Erlangung des Doktorgrades
beim Fachbereich Veterinärmedizin
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7. Summary

For conservative treatment of pyometra the antiprogestin RU 46534 (Aglépristone) was applied in 41 bitches. While the first six bitches were treated with 20 respectively 10 mg/kg bm on day 1 and 7, the other dogs were treated on days 1, 2 and 7 with 10 mg/kg bm; treatment was by subcutaneous injection. On the day of presentation all dogs showed either increased white blood cell counts or an elevated rectal body temperature and hence treatment with an antibioticum (Baytril® oder Synulox®) was initiated. Effects of treatment with the antiprogestin and course of illness were controlled by repeated clinical, sonographical and hormone-analytical examinations as well as by applying a broad spectrum of laboratory diagnostical methods until 4 weeks after onset of treatment. Treatment proved to be successful in dioestrous bitches (progesterone > 1 ng/ml respectively 3.179 nmol/l). In these successfully treated bitches (groups A and B; n=25) a rapid general improvement was observed including normalization of feed and water intake; these observations were paralleled by an increased vulval discharge, which led to the disappearance of a sonographically detectable uterine lumen (initial mean diameter 20 mm) during the observation period. The determined laboratory parameters showed a high individual variation. However, as expected, on the day of presentation in general a leucocytosis and neutophilia were aparent combined with a lymphopenia in many dogs. While total white blood cells and neutrophilic granulocytes reached normal levels rather rapidly, the increase of lymphocytes was only gradual; however, figures determined at the end of observation period were at the lower normal range. The enzymes determined [γ -glutamyltransferase (γ -GT), glutamate dehydrogenase (GLDH), alanine aminotransferase (ALT), aspartate aminotransferase (AST) and alkaline phosphatase (ALP)] as well as blood urea and creatinine showed no significant changes during the observation period; also cortisol levels did not change during treatment. Where possible health status of all dogs was recorded over an extended period of time (mean value 14 months). From the successfully treated animals of groups A and B only two bitches exhibited a recurrence of pyometra, most other bitches were reported to exhibit normal cyclicity and two further bitches were successfully bred. With one exception treatment was not successful in those dogs showing progesterone levels below 1 ng/ml (< 3.179 nmol/l) on the day of presentation.

Ovariohysterectomy had to be performed and apart from a uterine filling also ovarian cysts could be diagnosed. Also the 4 dogs from group D, which could not be treated successfully inspite of progesterone levels above 1 ng/ml, exhibited ovarian cysts of various sizes. As a result of these studies the conclusion can be drawn that conservative treatment of pyometra with an antiprogestin is indicated in dogs showing normal ovarian function and being in the state of dioestrus (progesterone > 1ng/ml respectively 3.179 nmol/l). Side-effects were not observed.