

PROGESTERONE RECEPTOR BLOCKER IN THE TREATMENT OF CLOSED PYOMETRA IN A BITCH

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A five years old Pomeranian bitch was presented to the clinics with the history of anorexia, dullness, vomiting and a highly distended abdomen. A closed pyometra was diagnosed based on medical history, clinical examination and laboratory findings. Medical management of the condition with Mifepristone and Misoprostol with supportive therapy was done for 8 days. Pus discharge from vagina started gradually on day 3 of treatment. On ultrasonographic examination pus pockets were still detected on day 7. Hence, Dinoprost tromethamine was used for next 7 days with recommended dosage which lead to complete reduction in uterine lumen and absence of visible discharge by day 14 of the treatment. Administration of dinoprost tromethamine in combination with mifepristone can be used effectively in the treatment of pyometra in bitches.

Keywords: Closed pyometra, Mifepristone, Misoprostol, Dinoprost, Bitch.

Pymetra is a reproductive disorder of diestral bitch which affects nearly one fourth of all female dogs before they reach ten years of age (Egenvall *et al.*, 2001). By definition it is the accumulation of pus within the uterine lumen, typically occurring during or immediately following a period of progesterone dominance (Noakes *et al.*, 2009). Progesterone receptor blockers (Mifepristone) have been used as treatment for closed pyometra in canines (Fieni, 2006). Its use in combination with prostaglandin has therapeutic possibilities with a high success rate for treatment of pyometra (Shah *et al.*, 2016).

Case history and Diagnosis

A five years old female Pomeranian dog was presented at TVCC, College of Veterinary Science and Animal Husbandry, Jabalpur with the history of anorexia, dullness, frequent vomiting, dehydration, distended abdomen, polydipsia and polyuria. Clinically no vaginal discharge was found. Haemato-biochemical examination revealed high value of TLC ($32.18 \times 10^3/\mu\text{l}$), Neutrophils (76.86%), ALT (54.81 U/L), ALP (154.71 U/L), BUN (39.78 mg/dl) and Creatinine (2.06 mg/dl). A tentative diagnosis of closed pyometra was made based on the above symptoms and laboratory investigation. However, presence of large anechoic pus pockets in the region of uterus by

ultrasonographic examination was confirmatory diagnosis for closed pyometra (Fig.1).

Treatment and Discussion

The ailing dog was subjected to intravenous fluid therapy, antibiotics (ceftriaxone plus tazobactam @ 15-25 mg/kg b.wt. I/V for 7 days), tab. Mifepristone @ 3 mg/kg orally twice daily on day 1, 2 and 8 and tab. Misoprostol @ 5 mcg/kg intravaginally twice daily from day 3 to 7 along with supportive treatment. Pus discharge started from vagina gradually from third day of treatment may be due to opening of cervix. Mifepristone proves to be safe and efficient drug for opening cervical canal in dogs with closed pyometra as also reported by Shah *et al.* (2016). The values of haemato-biochemical parameters were decreased as compared to that of before start of treatment. Ultrasonographic examination on day 8 of treatment revealed decreased in endometrial thickness, total lumen diameter and pus content of uterine horns. However, pus discharge was not completely disappeared after the treatment. Thus, dinoprost tromethamine was used at progressively increasing dose @ 50-200 mcg/kg subcutaneously once daily for 7 days (50 mcg/kg on day 1, 100 mcg/kg on day 2, 150 mcg/kg on day 3 and 200 mcg/kg on day 4 to 7) along with supportive treatment that

consists of anti-emetic, anti-cholinergic drug as well as oral calcium supplement and immune stimulants etc. All haemato-biochemical parameters returns to normal (TLC- $13.65 \times 10^3/\mu\text{l}$, Neutrophils- 68.75%, ALT-24.28 U/L, ALP-115.85 U/L, BUN-06-25 mg/dl and Creatinine-1.06 mg/dl) post

treatment and no abnormality in uterine horn was observed in ultrasonographic examination (Fig.2). The dog was recovered completely after therapy without any further complications and recurrence upto two months.

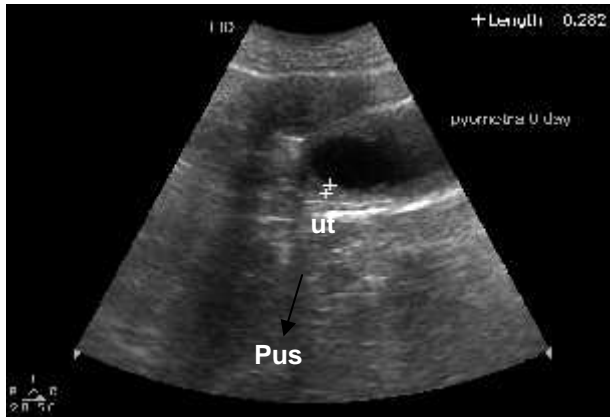


Fig.1: Ultrasonograph showing pus filled uterine horn before treatment

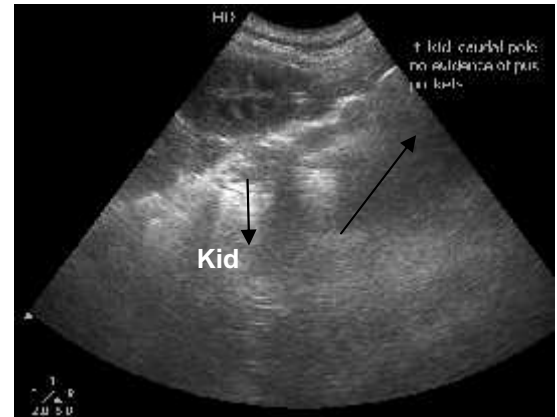


Fig.2: Ultrasonograph showing no evidence of pus pockets after end of treatment

References

- Egenvall, A., Hagman, R., Bonnet, B., Hedhammar, A., Olsson, P. and Lagerstedt, A. (2001). Breed risk of pyometra in insured dogs in Sweden. *J. Vet. Int. Med.*, **15**: 530-538.
- Fieni, F. (2006). Clinical evaluation of the use of aglepristone, with or without cloprostenol, to treat cystic endometrial hyperplasia-pyometra complex in bitches. *Theriogenology*, **66**: 1550-1556.
- Noakes, D.E., Parkinson T.J. and England G.C.W. (2009). *Arthur's Veterinary Reproduction and Obstetrics*. 9th edn., Published by Saunders Elsevier, Edinburgh, U.K. Pp. 658.
- Shah, M., Pande, N., Shah, I., Agrawal, R., Sharma, U. and Ghuman, S. (2016). Treatment of Pyometra in female dogs using Prostaglandin F₂ ± Antiprogestin (Mifepristone). *Ind. J. Anim. Rep.*, **37**(1): 23-26.