

## **TREATMENT OF CYSTIC ENDOMETRIAL HYPERPLASIA - PYOMETRA COMPLEX USING PGF<sub>2</sub>α IN A CAT**

**S. Manokaran\*, R. Ezakial Napoleon, S. Prakash, M. Palanisamy and M. Selvaraju**

Department of Veterinary Gynaecology and Obstetrics,  
Veterinary College and Research Institute,

Tamil Nadu Veterinary and Animal Sciences University,  
Namakkal – 637 002, Tamil Nadu, India

E-mail: smanokaran1976@gmail.com (\*Corresponding Author)

**Abstract:** A queen cat aged three years admitted with the history of anorexia and purulent vaginal discharge was diagnosed as Cystic Endometrial Hyperplasia - Pyometra Complex using ultrasonography. It was treated with dionprost tromethamine (PGF<sub>2</sub>α) for 5 days and recovered uneventfully.

**Keywords:** queen cat, pyometra, prostaglandin F<sub>2</sub>α, mucopurulent discharge.

### **Introduction**

Cystic endometrial hyperplasia and pyometra (CEH-PYO) complex is characterized by progesterone induced hyperplasia of the endometrium, cystic dilatation of the endometrial glands and inflammation of the uterus, with purulent contents (Stanley and Pacchiana, 2008). The CEH-PYO complex is much less common in the queens than in bitches, probably because ovulation is induced by coitus (Johnston *et al.*, 2001). Ovario-hysterectomy (OHE) is usually recommended treatment for CEH-PYO complex in queens (Verstegen *et al.*, 2008). However, considering breeding value of pet, to preserve the reproductive capacity or due to owner's interest medical management without OHE is desirable. Prostaglandin F<sub>2</sub>α (PGF<sub>2</sub>α) have been proved to be effective for medical treatment of CEH-PYO in bitches (England *et al.*, 2007) but clinical studies on its utilization in feline are rare. Hence, the study was conducted to assess the effect of PGF<sub>2</sub>α in the medical treatment of CEH-PYO complex in a queen cat.

### **Case History and Clinical Findings**

A three years old, local breed female cat was brought to Small Animal Obstetrics Unit of Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Namakkal with the history of restlessness, anorexia, loss of body condition, unkempt appearance, dysphorically groan and mucopurulent vaginal discharge (Fig. 1) with foul smelling odor. The

cat was treated locally for one week but no improvement was observed. General clinical examination showed rectal temperature of 38.9°C, heart rate of 132/minute and respiration rate of 60/minute. The trans-abdominal ultrasonographic (2.5 & 3.5 MHz transducer, MyLab30 VET Gold) examination revealed a thickened uterine wall having cystic dilatation of endometrial glands, endometrial hyperplasia, thickened uterine wall with anechoic uterine contents. Hematological studies showed leukocytosis and neutrophilia with left shift. The serum sample examination revealed the blood urea nitrogen and creatinine levels were elevated. Based on the clinical, ultrasonographic and biochemical examination the case was confirmed as Cystic endometrial hyperplasia and pyometra complex.

### **Treatment and Discussion**

The cat was stabilized with 25 ml of DNS (i/v). It was administered with 0.2 mg of PGF<sub>2</sub>α (Dinoprost tromethamne, inj. Lutalyse, Pfizer India Ltd., Mumbai) subcutaneously and inj. Ampicillin and cloxacillin (20 mg, i/v) for 5 days. During treatment a physical examination was performed every day and females were monitored by ultrasonography every other day. In this study, the cat exhibited increased mucopurulent discharge during first three days of treatment. Afterwards the discharge reduced. Simultaneously the uterine diameter was reduced and absence of anechoic areas was observed by ultrasonography.

Although CEH-PYO complex was less common in the queen than in the bitch, still is one of the most common illnesses observed in feline reproductive practice (Verstegen *et al.*, *loc cit*). In the present study, dinoprost tromethamine was found to be effective in medical treatment of CEH-PYO complex in queens. Dinoprost tromethamine was efficacious to evacuate the uterine content and to recover from the open-cervix pyometra (Garcia *et al.*, 2012). Davidson *et al.* (1992) observed some of the transient post injection reactions following PGF<sub>2</sub>α administration like vocalization, panting, restlessness, grooming, tenesmus, salivation, diarrhea, kneading, mydriasis, emesis, urination, and lordosis. To avoid the side effects, Verstegen *et al.* (*loc cit*) recommended to start the treatment with lower dose and slowly increased the dose after 2-3 days.

From this study it is concluded that PGF<sub>2</sub>α (dinoprost tromethamine) is an efficient option for medical management of queens with Cystic endometrial hyperplasia with open cervix pyometra.

### **Summary**

Cystic endometrial hyperplasia - pyometra complex in a queen cat was successfully treated with PGF<sub>2</sub>α (dinoprost tromethamine) and is reported.

**References**

- [1] Davidson, A.P., Feldman, E.C. and Nelson, R.W. (1992). Treatment of pyometra in cats using PGF<sub>2</sub> $\alpha$ : 21 cases (1982-1990). *J. American Vet. Med. Assoc.*, **200**: 825-828.
- [2] England, G.C., Freeman, S.L. and Russo, M. (2007). Treatment of spontaneous pyometra in 22 bitches with a combination of cabergoline and cloprostenol. *Vet Rec.*, **160**:293-6.
- [3] Garcia, M.M.C., Stornelli, M.C., Tittarelli, C.M., Mansilla, H.D., De La Sota, R.L. and Strnelli, M.A. (2012). Use of cloprostenol for treatment of feline open-cervix pyometra. Abstract presented in 7<sup>th</sup> International Symposium on Canine and Feline Reproduction conducted at Whistler, Canada.
- [4] Johnston, S.D., Kustritz, M.V.R. and Olson, P.N.S. (2001). Canine and Feline Theriogenology. 1<sup>st</sup> Eds., W.B. Saunders Company, Philadelphia. pp: 463-471
- [5] Stanley, S.W. and Pacchiana, P.D. (2008). Uterine torsion and metabolic abnormalities in a cat with pyometra. *Canadian Vet. J.*, **49**: 398-400.
- [6] Verstegen, J., Dhaliwal, G. and Verstegen-Onclin, K. (2008). Mucometra, cystic endometrial hyperplasia, and pyometra in the bitch: advances in treatment and assessment of future reproductive success. *Theriogenology*, **70**: 364-374.



**Fig 1:** Cat showing purulent discharge from vagina