A CRITICAL CASE OF CLOSED CERVIX PYOMETRA IN A BITCH

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Pyometra is accumulation of purulent material within the uterus, which manifests in both local and systemic symptoms, and demands costly surgical or medical intervention (Hagman *et al.*, 2011). Pyometra is typically a post-oestral syndrome in adult bitches associated with a variety of clinical and pathological manifestations of genital and multisystemic disease. Uterine exposure to progesterone during canine dioestrus plays a key role in the pathogenesis of the disease. Progesterone induces changes in the uterus which prepare a suitable environment for early embryo development, including endometrial proliferation, increased uterine glandular secretions and decreased myometrial contractions, as well as a relaxation in normal uterine cellular immune defences (Noakes *et al.*, 2009). It is postulated that intrauterine bacteria, which ascend from the vagina during pro-oestrus and oestrus, induce the disease during metoestrus by acting on the progesterone-primed endometrium directly via toxin production, or indirectly by the release of inflammatory mediators (Noakes *et al.*, 2001). Parity and age are significant risk factors in the development of pyometra (Niskanen and Thrusfield, 1998).This case report communicates the successful management of a critical case of closed cervix pyometra in a German shepherd bitch.

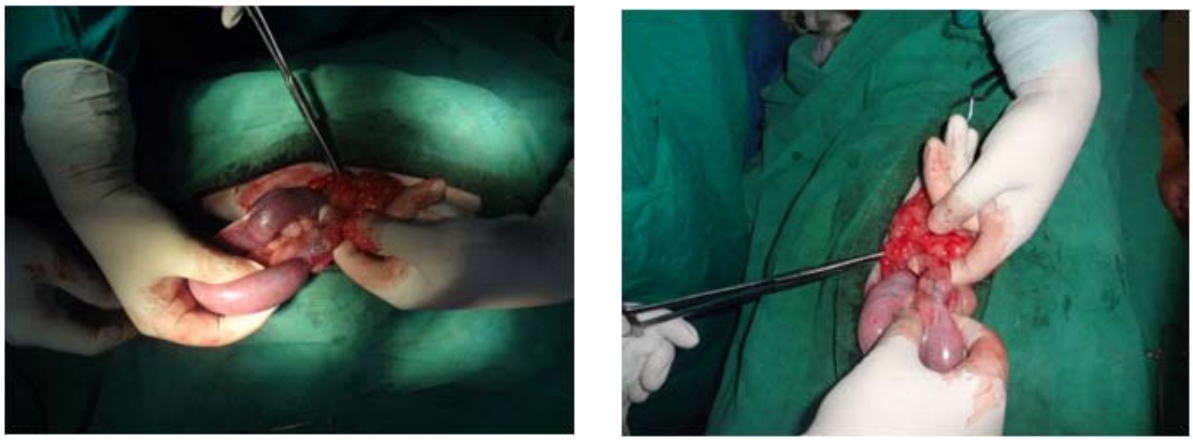
CASE HISTORY AND CLINICAL OBSERVATIONS

A five years old female German shepherd bitch was presented with a history of vomiting, polydipsia and polyuria. The clinical examination revealed that temperature, pulse and respiratory rate were 100.4^0F, 97/min and 67/min, respectively. The visible conjuctival mucous membrane was deeply congested indicative of toxaemia and dehydration. Abdominal palpation revealed enlarged uterus and uterine horns were unclear due to tense abdomen. Vaginal examination revealed closed cervix and there was no discharge. Haematology revealed leucocytosis with neutrophilia and predominant shift to left. The bitch was fasted overnight and plain radiographs were taken in the lateral recumbent position in the next morning. The uterus was seen as fluid dense tubular structure in the ventral and caudal abdomen. Ultrasonography depicted round hypoechoic to anechoic area. The ultrasonography was performed by B-mode, scanner with 7.5 MHz linear array transducer. The diagnosis of the case was made by correlation of history, clinical observation, haematology, vaginal examination, abdominal palpation, radiography and ultrasonography.

TREATMENT AND DISCUSSION

In the present case, the animal was controlled in dorsal recumbency and the caudal mid ventral abdomen was prepared for aseptic surgery. General anaethesia was induced and maintained by a combination of ketamine hydrochloride @ 5 mg/kg and Xylazine @ 0.2 mg/kg body weight intravenously following premedication with atropine sulphate @ 0.04 mg/kg body weight. Laparotomy was performed through caudal mid-ventral abdominal incision and the heavy pus filled uterine horns and body were exteriorized after thoroughly packing the abdominal wound (Fig. 1). The ovaries, ligaments and blood vessels were carefully identified and resected after application of modified transfixation ligatures. The laparotomy incision was closed by following routine standard procedures.

Fig1: Pus filled uterine horns on caesarean section



Post-operative management included Inj. DNS-400 ml and Inj. Metroniazole-100 ml i/v daily for one week, and Inj. Intacef-500 mg daily for 5 days, Inj. Melonex-1.5 ml daily for 3 days and Inj. B-complex -1 ml i/m daily for one week. The appetite, vital signs and volume and nature of any vaginal discharge were recorded daily for 15 days post-surgery. A blood sample was obtained for haematology at 15 days post-surgery. By 15th post-operative day, cutaneous sutures were removed and the bitch appeared active with good appetite.

Most bitches affected with pyometra are presented during the luteal phase of the cycle. Predominant clinical signs are polyuria and polydipsia. Bitches suffering from a closed pyometra are often presented at a later stage of the disease, when endotoxins absorbed from the uterine lumen have already resulted in a generalised illness. Affected animals usually have an elevated WBC count. In many cases they also have a prerenal acetemia, hyperproteinemia and hyperglobulinemia. For the medical treatment of pyometra varying prostaglandins are mainly used. Anti-progesterone can be used as a single treatment or in combination. Additionally, a broad-spectrum antibiotic treatment is recommended.The clinical course of the disease and consequently the symptoms, vary from prolonged development of chronic uterine inflammation to sudden death in endotoxic shock (Hardy and Osborne, 1974). The choice of ovariohysterectomy was to stop the endotoxaemia and avert probable kidney failure. It was recommended that the best prevention for pyometra would be to spay all female dogs that are not meant for breeding before six months of age.

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TREATMENT OF PROBABLE CASES OF BACILLARY HEMOGLOBINURIA IN COWS-A FIELD TRIAL REPORT

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ABSTRACT

Eighteen cows at different stages of suspected bacillary haemoglobinuria were treated with strepto-penicillin. On first day, Streptomycin sulphate 25 mg /kg body wt , on 2nd and 3rd day Procaine benzyl penicillin 10 lakh IU and Streptomycin sulphate 4 g intramuscularly were administered. All the treated cows were recovered.

KEY WORDS : Cows, *Clostridium hemolyticum*, Bacillary hemoglobinuria, Strepto-penicillin

INTRODUCTION

Bacillary hemoglobinuria caused by *Clostridium hemolyticum*, which is common in cattle, is an acute intoxication terminating fatality in cattle (Sastry, 1983; Radostits, 1994). Probable cases of bacillary hemoglobinuria in field condition were tentatively diagnosed and treated. A successful and safer treatment for bacillary hemoglobinuria in large animals with Streptopenicillin was evolved.

MATERIALS AND METHODS

Eighteen cases with the symptoms of pyrexia (41.5^{0}C), anorexia, dullness, and suspended rumination defecation and lactation on the first day, followed by hematuria and greenish watery diarrhoea on 2nd day, and dark brown diarrhoea with clots of blood, subnormal temperature, shallow respiration and death, if not treated, on 3rd day were recorded. Four cows died inspite of careful treatment. In recently calved hefty cows death occurred in 1-2 days with all the above symptoms.

For the remaining 14 cows blood smear, blood and urine analysis were done but no organism or biochemical parameters of any etiological significance detected. Due to the field limitations the cases were tentatively diagnosed as bacillary hemoglobinuria.

All the 14 cows with hematuria were administered with Streptomycin sulphate 25 mg /kg body wt (Karnataka Antibiotics Ltd), on the very first day, and on 2nd and 3rl day both Procaine benzyl penicillin 10 lakh IU and Streptomycin sulphate 4 g intramuscularly. One cow required 4th day treatment. No other treatment including styptics was given.

RESULTS AND DISCUSSION

All the cows showed signs of recovery on 2nd day evening onward like reduction in urine colour, partial feeding and alertness. On 3rd to 4th day evening all the animals recovered completely. No abortion noticed in the five pregnant cows. Two cows required liver extract and dextrose injections on 4th day to regain normal feeding.

The diagnosis of bacillary hemoglobinuria is always a question and confusing with other diseases like babesiosis, anaplasmosis in which hemoglobinuria is a pathognomonic symptom. Clinical and laboratory examinations and post-mortem findings of some diseases with the above symptoms are uncommon in this area. Also diseases like braken fern poisoning and black disease are also uncommon to this area. Post-parturient hemoglobinuria is limited to calved cows and not responded to the treatment for a cow among the four dead. Negative result of aerobic culture and urine analysis ruled out the absence of pyelonephritis.

In this disease, owing to many limitations and acute necessity in the field condition, tentative diagnosis only could be possible. This tentative diagnosis was confirmed with the good response to the treatment. This treatment is safe, effective and economical. Among the various reviewed literatures there is no record of use of streptomycin for hemoglobinuria.

Thus, bacillary hemoglobinuria was successfully treated with Strepto-penicillin in 14 out of 18 clinical cases under field conditions.

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