



Treatment of Mucopurulent Endometritis in a Rhesus Monkey: A Case Study

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ABSTRACT

This report describes the treatment of Mucopurulent Endometritis in a Rhesus monkey. The involved she-monkey was three years old and weighing five kg body weight lived as a home animal, brought by the owner to the clinic of the College of Veterinary Medicine, University of Mosul. Clinical and Ultrasonography examinations diagnosed the presence of Mucopurulent discharge as refers to Mucopurulent Endometritis. Treatment was done by using estrogen and oxytocin hormones to local and systemic treatment with antibiotics. Ten days later, the owner reported that the monkey was doing well and accepted mating again and when reexamined, she showed complete healing of the uterus.

Keywords: Endometritis, Mucopurulent, Rhesus Monkey, Ultrasonography.

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INTRODUCTION

Endometritis is an inflammatory condition of the lining layer of the uterus and occurs due to an infection; it's usually not life-threatening but needs initiated treatment (Noakes *et al.*, 2002). There was very little information dealing with a uterine infection or inflammation, but, Endometritis had been reported in Rhesus monkeys (Digiacom, 1977) and Baboons (Thomas and D'Hooghe, 1977) with no refers to treatment. The causes of inflammation in Rhesus monkeys are different: dystocia, postpartum period infections, toxicities, C-section and injection of ovarian steroids (Digiacom *et al.*, 1977).

This report describes Mucopurulent Endometritis in Rhesus monkeys for the first time reported. According to Dubuc *et al.*, (2010), the presence of Mucopurulent or worse vaginal discharge (purulent or foul) were classified the animal as having endometritis.

CASE DESCRIPTION:

The involved monkey was three years old and weighing five kg body weight lived as a home animal brought by the owner to the College of Veterinary Medicine clinic, University of Mosul. He claimed that the monkey was suffering from Mucopurulent discharge from the vagina and she refused to mate with the male after the clinical signs rose with loss of appetite (Fig.1).



Fig. 1: Shows the treated monkey.

CLINICAL EXAMINATION:

Clinical examination was done after the animal went under general anesthesia. General examinations and case history of the animal were complete, heart rate and respiratory rate were examined too. Vaginal examinations were done by visual inspection. The reproductive system was checked using B- mode ultrasonography. Ultrasound examination showed plenty of pus accumulation in the uterus (Fig. 2).

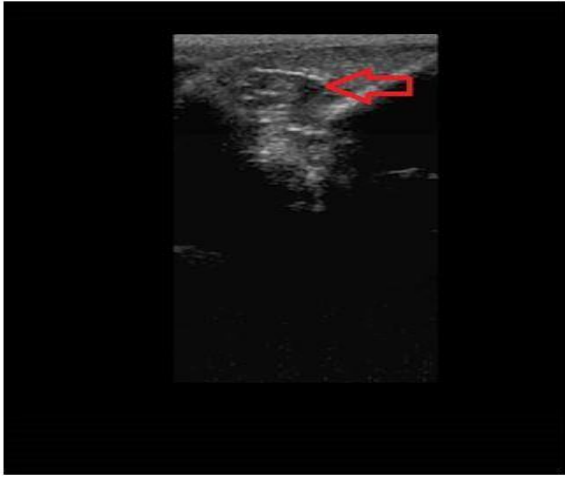


Fig.2: Accumulation of pus in uterine lumen.

TREATMENT AND ANESTHESIA PROTOCOL:

Atropine sulphate was used as a pre-anesthetic at 0.04 mg/kg body weight. Xylazine was used for sedation at the rate of 1mg/ kg body weight and ketamine was used for anesthesia at the rate of 5 mg/kg body weight intramuscularly (Kanun et al., 1977).

Treatment strategies include two ways: the first one by using a hormonal protocol which involves was by using 0.5 mg of estrogen 0.2% (Estradiol benzoate, Hebei Chengshengtang Animal Pharmaceutical Co., Ltd, China) Intramuscularly and after 8 hours later; five international units of oxytocin 10%(Intercheme Inc., Holland) was injected intramuscularly.

Uterine washing was done using 0.5 ml of cetiflonel antibiotic(Intercheme Inc., Holland) diluted in 5ml of normal saline as local therapy. Systemic antibiotic injection using cetiflonel antibiotic injection as 0.1 ml for three days following. Ten days later, the owner reported that the monkey was doing well and brought the she-monkey to the clinic, where reexamined by using Ultrasonography, which revealed complete healing of the uterus(Fig. 3).

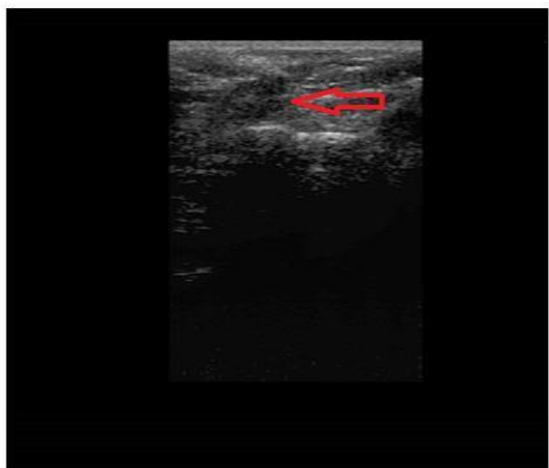


Fig.3: Uterine lumen 10 days following treatment with advanced healing.

This is the first report of successful treatment of Mucopurulent Endometritis in Rhesus monkeys by using estrogen and oxytocin with uterine washing by cetiflonel as local and systemic treatment. Hormones are used to increase uterine defenses' efficacy and facilitate uterine evacuation. Agents may be classified into two categories; those that directly affect the uterus and those that cause estrus or a condition similar to estrus through the use of estrogen (Pulfer and Riese, 1991).

Increased myometrial tone and movement and activation of uterine immune systems are initiated by estrogen stimulation of the uterus (Gustafsson , 1984). The other advantage is using estrogen-regulated and oxytocin receptors synthesis in the uterus (Quiñones-Jenab et al., 1997). Potential force to evacuate purulent material outside the uterus can be invented by injected oxytocin hormone which causes significant contraction of uterine muscles. This activity is conjugated with the successful benefit work of estrogen (Pooja and shamas, 2017; Naoman, 2021). Uterine washing by the antibiotic is done to provoke uterine defense mechanism and reduce the causative agents and bacteria, which help increase the healing process with systemic antibiotics (Azawi, 2008).

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