

DAFTAR PUSTAKA

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LAMPIRAN

Lampiran 1. English Version

MANAGEMENT OF UTERINE PROLAPSE IN DOMESTIC CATS

ABSTRACT. Uterine prolapse is the condition of uterine descent from its anatomical boundaries. Uterine prolapse is a condition associated with postpartum complications. Uterine prolapse occurs due to dystocia, uterine

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atony, incomplete separation of the placenta, excessive perineal relaxation, and strong contractions due to oxytocin induction during parturition. This case occurred with a female cat named Kimo on Monday, January 9, 2023. Kimo came to the Animal Health Center of Makassar City with both cornua uteri out of the vulva. After diagnosis by the inspection method, the veterinarian in charge conducted an examination before proceeding to handling and treatment. The treatment given was repositioning the cornua of uterus, followed by ovariohysterectomy (OHE). Postpartum treatment is an antibiotic injection, anti-inflammatory medication, and antibiotic ointment, with a dose administered twice a day. On Friday, January 20, 2023, Kimo came back to the Animal Health Center of Makassar City to remove the stitches. Before the sutures were removed, a clinical examination was performed, which showed that the body temperature was 37.9 °C, the wound closed completely, and according to the owner's statement, during the treatment at home, Kimo never showed any disturbances such as vulva discharge, lethargy, or pain response.

Keywords: Uterine prolapse, domestic cat, ovariohysterectomy

I. INTRODUCTION

Uterine prolapse is a condition associated with postpartum complications. Cases of uterine prolapse in cats are more common than in dogs (Deroy et al., 2014). Uterine prolapse occurs due to dystocia, uterine atony, incomplete separation of the placenta, excessive perineal relaxation, and strong contractions due to oxytocin induction during parturition (Sikra et al., 2021; Ucmak et al., 2018). Clinical signs in cats are vaginal discharge, cramping, ataxia, and pain, and the cornua uteri is seen coming out of the vagina. Uterine prolapse with both cornua of uterus (uterine horns) protruding can be called a complete bicornual uterine prolapse (Deroy et al. 2014).

Post-prolapse organ damage that occurs can be caused by infection from the surrounding environment and cats that often lick the organs that have come out (Deroy et al. 2014). Diagnosis can be done by inspection; the treatment for cases of uterine prolapse is ovariohysterectomy (OHE). OHE action aims to prevent recurrent cases and infections in organs that can result in sepsis (Sikra et al., 2021; Deroy et al., 2014).

II. CASE DESCRIPTION

On Monday, January 9, 2023, a domestic female cat named Kimo came to the Animal Health Center of Makassar City.

Kimo came in with both cornua uteri protruding through the vagina. Based on the owner's information, Kimo was in labor the day before with a total of 5 fetuses who experienced stillbirth, and Kimo had experienced a similar case that was given cornua of uterus repositioning action at one of Makassar's veterinary clinics at the request of the owner. Then, after the parturition process was completed, Kimo experienced anorexia. After clinical examination, it was found that Kimo was not dehydrated; its body temperature was 37.7 °C; both cornua uteri came out of the vagina; and there was no fetus left in the cornua of the uterus.



Figure 1. Kimo's initial condition

III. RESULTS AND DISCUSSION

The diagnosis of uterine prolapse is made based on the results of the inspection and the patient's history. According to Kimani et al. (2020), the diagnosis of uterine prolapse can be concluded based on inspection and information from the owner.

Based on the owner's information, Kimo had experienced parturition five times and had experienced a case of uterine prolapse in the previous parturition. On Monday, January 9, Kimo experienced uterine prolapse shortly after having an abortion with a total of five fetuses. According to Binli et al. (2021), cases of uterine prolapse are rare in cats. However, it usually occurs right after parturition, up to 48 hours after parturition, or abortion in primiparous or multiparous cats. Treatment of uterine prolapse is carried out with OHE measures. According to Kimani and Mbugua (2020), OHE is recommended for the management of uterine prolapse, followed by tissue damage and hyperemia.

The OHE procedure begins with repositioning the two cornua of the uterus so that they return to their normal position. After repositioning, the OHE procedure begins with sterilization of the surgical site based on the orientation point of the OHE flank in cats, which is midway between the last costae and the iliac crest.



Figure 2. Repositioning of the uterus

Then, an incision is made on the skin, subcutaneous, *M. abdominis externus*, and *M. abdominis internus*. After reaching the abdominal cavity, the cornua uterus dexter and sinister, along with the ovaries, were gently pulled out, and then ligation of the blood vessels was performed using a 3/0 chromic suture.

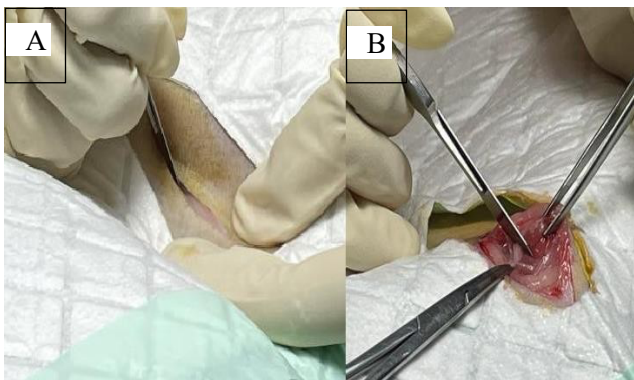


Figure 3. (A) Incision of the surgical site (B) Incision of *M. abdominis externus* dan *M. abdominis internus*.

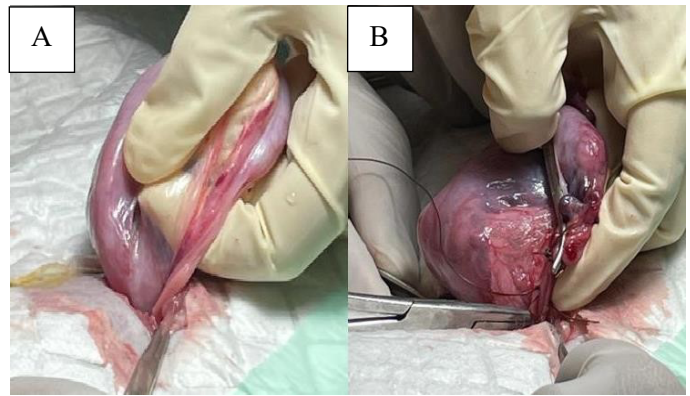


Figure 4. (A) The uterus and ovaries are lifted out (B) Ligation in blood vessel

After ligation, an arterial clamp is used to hold the tip of the ovary before transection and is then removed. Both cornua of the uterus are pulled together to expose the corpus uteri. The corpus uteri is grasped using forceps to prevent rupture and bleeding, while the uterine blood vessels are ligated. Once ligated, the cornua uteri and the corpus uteri are transected and removed.

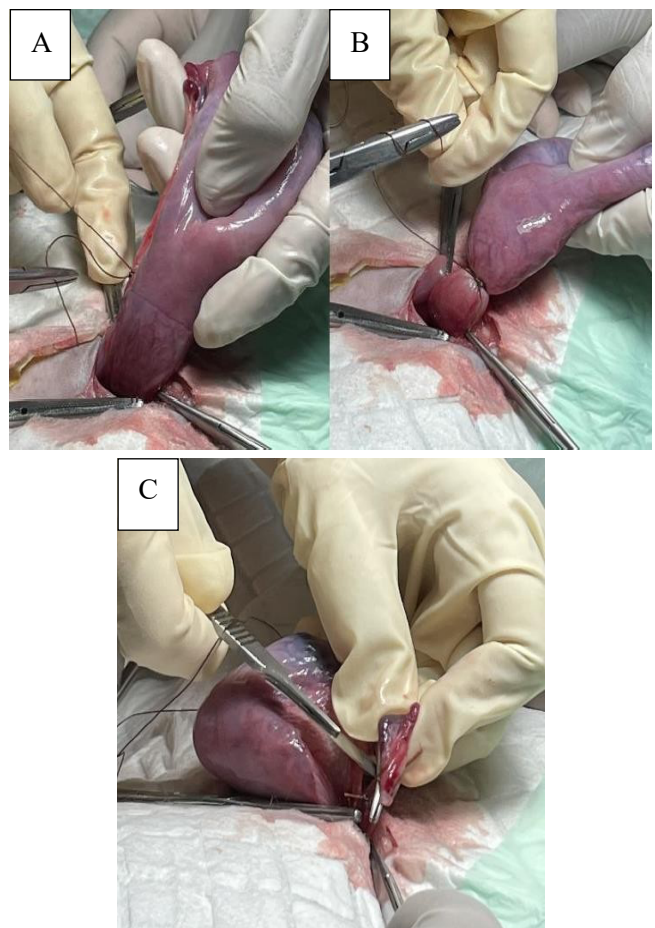


Figure 5: (A) Ligation of Blood Veins (B) Ligation of *corpus uteri* (C) Uterine transection.

After the uterus and ovaries were removed, the *M. abdominis* was closed using the sub-cuticular method, but in this stitch, there was a slightly open part, so several skin stitches were required using the simple interrupted method using 3/0 silk thread.

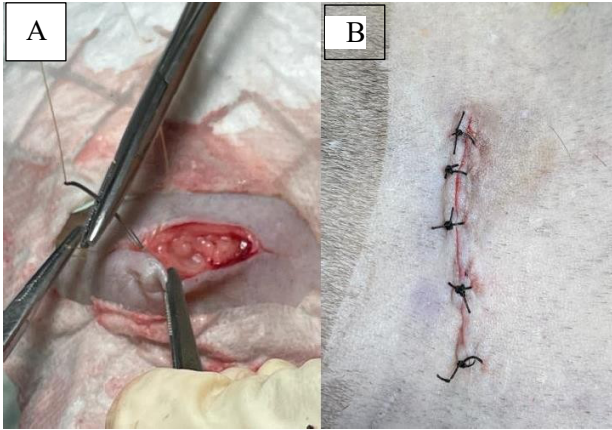


Figure 6. Condition of suture wounds.

Post-operative management was performed with an antibiotic injection (Intramox 0.33 ml) and an anti-inflammatory steroid (Glucortin 0.25 ml). Oxytetracycline ointment was applied twice a day. According to Wirawan (2022), antibiotic and anti-inflammatory injections are only given after wound closure. Factors that greatly influence wound healing are hygiene and proper wound management. According to Papich (2015), oxytetracycline is a broad-spectrum bacteriostatic. Oxytetracycline is used to treat infections of the respiratory tract (pneumonia), urinary tract, soft tissue, and dermis.



Figure 7. Wound dryness and closure

On Friday, January 20, 2023, Kimo came back to the Animal Health Center of Makassar City to remove the sutures. Before the stitches were removed, a clinical examination was performed, which showed that the body temperature was 37.9 °C, the wound closed completely, and according to the owner, during the treatment at home, Kimo never showed any

disturbances such as mucous discharge on the vulva, lethargy, or pain response.

CONCLUSION

Uterine prolapse is an obstetric emergency case because there is a risk of uterine rupture and bleeding, and treatment must be carried out before the accumulation of edema, mucosal trauma, and contamination. In cases of recurrent prolapse, OHE can be used.

RECOMMENDATIONS

Educate pet owners about the importance of sterilizing pets because it can reduce the population and reduce the chances of reproductive disorders such as vaginal prolapse.

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