

Effective resolution of a post-ovariohysterectomy cutaneous abscess in a young female cat following antibiotic switch from amoxicillin to cefadroxil

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ABSTRACT: This case report presents the first use of buried continuous intradermal sutures in Indonesia to treat a postovariohysterectomy cutaneous abscess in a young cat, with an antibiotic switch. A 6-month-old female cat, K (2.5 kg), developed a cutaneous abscess after ovariohysterectomy. Amoxicillin trihydrate (15 mg/kg q12h) was administered orally for postoperative antimicrobial therapy. On day 9, physical examination revealed swelling at the sutured incision site, an elevated rectal temperature (39.9°C), and a grimacing expression. Antibiotic therapy was continued with subcutaneous injection of long-acting amoxicillin (15 mg/kg). However, by day 18, the owner reported purulent discharge from the swollen area. Upon re-examination, the antibiotic regimen was adjusted by replacing amoxicillin trihydrate with cefadroxil (35 mg/kg q24h, orally). By day 21, significant healing was observed with a notable reduction in abscess size and complete cessation of pus discharge. In subsequent days, clinical signs gradually diminished, and K's overall condition improved, as indicated by the return of normal appetite, behavior, and activity. The sutured incision site healed well and blended seamlessly with the surrounding skin.

Keywords:

cutaneous abscess, antibiotic switch, amoxicillin, cefadroxil, post-ovariohysterectomy

■ INTRODUCTION

Midline laparotomy is the most common technique for ovariohysterectomy in domestic cats (Gates et al. 2020). Chutipongvivate et al. (2022) reported that 5.08% of animals sterilized through the Chiang Mai Municipal Animal Birth Control Program experienced postoperative wound complications. Healing of midline laparotomy incisions is often delayed due to postoperative issues (Rabbani et al. 2021), including seroma formation (Lopez et al. 2020) and self-inflicted trauma from scratching (Ouldamer et al. 2016). These complications may arise from inadequate care or cat tampering with sutures (Stavisky & Brennan, 2020). Xin et al. (2024) suggested that buried continuous intradermal sutures lower complication rates and reduce infection risk from self-trauma. This case report presents the first clinical application of this technique in small-animal practice in Indonesia, managing a post-ovariohysterectomy cutaneous abscess in a young female cat with antibiotic switching.

■ CASE

Anamnesis and Signalment: A 6-month-old female cat, K, weighing 2.5 kg underwent ovariohysterectomy via a midline laparotomy. On day 6, the owner reported that cat K had signs of pain and decreased appetite. By day 8, the owner noted swelling at the sutured incision and reduced activity.

Physical Examination: Swelling and pus from the sutured incision area, pain, pus excreted, rectal temperature of 39.9°C, decreased body weight, and grimacing facial expression. **Treatment**: Long-acting amoxicillin (15 mg/kg) was administered subcutaneously (Papich 2011) on day 9 to continue anti-infective treatment. With no signs of healing by day 18, amoxicillin was orally administered at 35 mg/kg q24h (Koch *et al.* 2012). Additional medications included dexamethasone 0.15 mg/kg q24h orally (Papich 2011) and gentamicin sulfate ointment 0.1% q2h topically (Koch *et al.* 2012), each for five days.

RESULTS AND DISCUSSION

Anti-infection treatment involved antibiotics from day 1 as prophylaxis until day 9 and again until day 18. Figure 1 shows the post-ovariohysterectomy cutaneous abscess from onset to recovery. Roy *et al.* (2007) reported Pasteurellaceae in 55% (66 of 120) of cat wound and abscess samples, with 92.42% being Pasteurella multocida. Streptococci were found in 14.16% of samples, 35.29% being *Streptococcus*

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Figure 1. The sutured incision area of Cat K's midline shows (A) swelling and pus discharge on day 9, (B) reduced swelling on day 21 after starting cefadroxil on day 18, (C) a return to normal condition, and (D) the cat resumed normal activities in subsequent days.

canis. Staphylococci, including *Staphylococcus intermedius* and *Staphylococcus* spp., were present in 14.16% of cases. Other bacteria included *Corynebacterium* spp. (6.66%) and *Enterococcus* spp. (4.16%).

For prophylaxis, enrofloxacin (0.05)mg/kg, intramuscularly) was administered to cat K before ovariohysterectomy. Devriendt et al. (2023) reported firstgeneration cephalosporins are more effective against these bacteria. Sørensen et al. (2024) noted limited high-quality data on surgical antimicrobial prophylaxis (SAP) regimens in cats. Bacteria that are abundant on cat skin, such as Bacteroides spp., are transferred during self-grooming (Older et al. 2017). Roy et al. (2007) found amoxicillin (11-22 mg/kg q12h) effective for skin wounds or abscesses infected by Pasteurella multocida and obligate anaerobes. However, Ramsey (2011) highlighted amoxicillin's ineffectiveness against β-lactam-producing bacteria like Escherichia coli and Staphylococcus aureus, and gramnegative bacteria like Pseudomonas and Klebsiella spp. are typically resistant to antibiotics.

Healing was evident after anti-infective therapy was replaced with cefadroxil. The change from amoxicillin to cefadroxil was based on cefadroxil 22-35 mg/kg q24h, which is indicated for wound infections and abscesses caused by gram-positive and gram-negative bacteria. Cefadroxil has a broad scope against gram-positive organisms, which are often involved in skin contamination and abscesses. Firstgeneration cephalosporins inhibit bacterial cell wall synthesis, leading to cell lysis and death (Koch *et al.* 2012). Cephalosporins such as cefadroxil are effective against common infections, including skin, pyoderma, and other dermal infections (Papich 2011).

CONCLUSION

Cefadroxil is the most appropriate antibiotic to replace amoxicillin for post-ovariohysterectomy cutaneous abscesses in cat K. **AUTHOR INFORMATION**

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