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Popular Article

## A Surgical Approach to Tom Castration: A Case Study

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### 1. Introduction

Tom castration, also known as neutering, is a routine and essential procedure performed in male cats to control overpopulation and mitigate various health and behavioural issues. The surgical removal of the testes offers benefits such as the reduction of aggression, territorial marking and the prevention of reproductive diseases like testicular cancer and prostatitis (Levy & Crawford, 2006). While the procedure is common, each case requires careful preoperative evaluation, a sterile surgical approach and proper postoperative management for successful outcomes.

This case study highlights a tom cat that underwent castration due to behavioural issues and the prevention of future health problems. The article discusses the surgical approach, postoperative care and medical considerations involved.

### 2. Case Study Overview

An eighteen-month-old male domestic cat having weight 4kg was presented to the, Department of Veterinary Surgery and Radiology, Veterinary Clinical Complex, PGIVER, Jaipur with a history of Aggressive behaviour toward other male cats, excessive territorial marking and roaming outside in search of mates. Owner concerns regarding health issues like testicular cancer.

After clinical evaluation and consultation, tom castration was selected as the most appropriate surgical intervention (Root Kustritz, 2007).





**Figure 2: Preparation of surgical site**



**Figure 3: Vertical incision made**



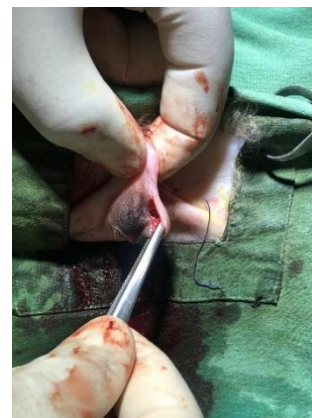
**Figure 1: Exteriorization of testicle with spermatic cord**



**Figure 6 : Cremaster muscle and vas deferens separation**



**Figure 5: Double ligation technique**



**Figure 4: Ensuring secure haemostasis**



**Figure 7: Excised testicles**

### Preoperative Considerations

Before surgery, Tom underwent a thorough physical examination and haematological screening to assess his fitness for anaesthesia and surgical intervention. Blood tests, including a complete blood count (CBC) and serum biochemistry, were performed to evaluate organ function. All parameters were within the normal range. Tom was fasted for 12 hours to minimize the risk of intraoperative regurgitation or aspiration. Tom was premedicated with atropine sulphate (@ 0.03 mg/kg) and butorphanol (@ 0.2 mg/kg) with Inj. Xylazine (@1mg/kg). General anaesthesia was induced using propofol (@ 8 mg/kg IV) and maintenance was done with isoflurane (@ 2-3%) via an endotracheal tube. The scrotal area was clipped and aseptically scrubbed using povidone-iodine followed by 70% alcohol, ensuring complete sterility of the operative field.

### 3. Surgical Approach

- A surgical site was prepared after shaving and scrubbing with painting of 5 % povidone-iodine solution. (fig.1).
- A vertical incision was made over each testicle through the scrotal skin using a scalpel (fig.2).
- The testis along with the spermatic cord was gently exteriorized through the incision (fig.3).
- The cremaster muscle and vas deferens were separated from the surrounding tissues using blunt dissection (fig.4).
- Double ligation technique was employed using absorbable suture material (Vicryl 3-0) to tie off the vas deferens and blood vessels, ensuring secure haemostasis and preventing postoperative haemorrhage (fig.5 & 6).
- After ligation, the testicle was excised distal to the ligature using surgical scissors (fig.7).
- The same procedure was repeated on the opposite testicle using a separate incision to minimize cross-contamination and reduce infection risk.

#### A. Intraoperative Monitoring

Throughout the surgery, heart rate, respiration, body temperature and oxygen saturation were monitored to maintain stable anaesthetic depth and physiological parameters. The surgery took approximately 20–25 minutes and Tom tolerated the procedure well, with no intraoperative complications.

#### B. Postoperative Care and Recovery

Following surgery, Tom was transferred to recovery and monitored until fully awake. Postoperative care included:

- Non-steroidal anti-inflammatory drugs (meloxicam @ 0.5 mg/kg OD) were administered to manage pain for three days and antibiotics (ceftriaxone @25 mg/kg BID) for 5 days.



- **Monitoring:** Tom's vitals were monitored during recovery until he regained full consciousness.
- **Discharge Instructions:**
  - Activity restriction for 7–10 days.
  - Use of an Elizabethan collar to prevent interference with the surgical site.
  - Monitoring for complications such as swelling, discharge, or infection.
  - Follow-up check on the 7th day post-surgery (Smith, 2011; Clark, 2018).

Healing was uneventful and Tom resumed normal behaviour within two weeks.

#### 4. Conclusion

Tom castration remains a cornerstone of feline reproductive management and behavioural control. In Tom's case, the surgery led to improved behaviour and minimized health risks without any postoperative complications. The surgical approach-when performed with proper technique and care-ensures a safe and efficient outcome for male cats (Sparkes et al., 2016).

This case underscores the value of neutering not just for population control but also for enhancing the welfare of domestic male cats.

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