



# PROCEEDING

International Seminar and 2<sup>nd</sup> Congress of SEAVSA

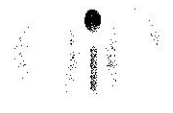
INCREASING ANIMAL PRODUCTION  
THROUGH ZONOSSES AND REPRODUCTIVE DISORDER  
HANDLING, AND THE IMPLEMENTATION  
OF BIOTECHNOLOGY



Surabaya, 21-22 June 2011  
Royal Ballroom, JW Marriott Hotel  
Surabaya - Indonesia

**Editors:**

- Mustofa Helmi Effendi (Indonesia)
- Rahayu Ernawati (Indonesia)
- Muhammad Yunus (Indonesia)
- Jean-Francois CHARY (French)
- Achariya Sailasuta (Thailand)
- Tjeerd Jorna (Netherlands)
- Kristy Demmers (New Zealand)
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**Faculty of Veterinary Medicine Universitas Airlangga**

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**RADICAL MASTECTOMY OF GYNECOMASTIA CASE IN SAANEN GOAT**

1

**Gunanti, R Harry Soehartono, Deni noviana, Budhy Jasa Widyananta,  
Dudung Abdullah, Rr Soesatyoratih, Riki Siswandi, and M Fakrul Ulum**

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In this study, we reported a successful surgery of gynaecomastia case in a high reproductive performance Saanen buck-goat. The goat was presented with significant enlargement of the mammary glands, which was clinically diagnosed as gynaecomastia. The mammary glands had been impairing the goat's sexual performance and locomotion. After clinical and laboratorial evaluation, the animal was submitted to radical mastectomy. The surgery performed under inhalational anesthesia. An elliptic skin incision was performed around each mammary gland. Subcuticular blunt dissection was accomplished to isolate the mammarian tissue from the abdominal muscular layer. Subcuticular layer and skin closure was carried in a routine fashion. Hygienization of the surgical wound was performed with 3 % povidone iodine solution for seven days. Post-operative treatments were carried using combination of procaine penicillin-G and streptomycin, and dexamethasone. The excised mass was sampled for anatomic/histological assessment. Macroscopically, the left mammary gland presented 37,6 cm in length, 36 cm wide and gross weight 0,6 kg. The right gland presented 48 cm in length, 43,5 cm wide and gross weight 1,6 kg. The microscopic assessment revealed hyperplasia of the glandular ducts. No abnormalities resembling malignant mammary neoplasms or degeneration were observed. The surgical procedure was successfully accomplished without any perioperative complication. The animal recuperated satisfyingly and surgical wound healed completely within the first 7 days post-operation. The goat was not culled and returned to normal reproductive activity. Within 3 months of follow-up, the animal was able to perform normal reproductive activity and successfully conceived 3 does.

**Keywords:** Gynaecomastia, mammary gland, goat anesthesia, Saanen goat, mastectomy

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**INTERNATIONAL SEMINAR AND 2<sup>ND</sup> CONGRESS OF SEAVSA**  
*Increasing Animal Production through Zoonoses and Reproductive  
Disorder Handling, and the Implementation of Biotechnology*  
JW MARRIOTT HOTEL SURABAYA - INDONESIA  
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# Radical Mastectomy of Gynecomastia Case in Saanen Goat

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## Abstract

In this study, we reported a successful surgery of gynecomastia case in a high reproductive performance Saanen buck-goat. The goat was presented with significant enlargement of the mammary glands, which was clinically diagnosed as gynecomastia. The mammary glands had been impairing the goat's sexual performance and locomotion. After clinical and laboratorial evaluation, the animal was submitted to radical mastectomy. The surgery performed under inhalational anesthesia. An elliptic skin incision was performed around each mammary gland. Subcuticular blunt dissection was accomplished to isolate the mammarian tissue from the abdominal muscular layer. Subcuticular layer and skin closure was carried in a routine fashion. Hygienization of the surgical wound was performed with 3 % povidone iodine solution for seven days. Post-operative treatments were carried using combination of procaine penicillin-G and streptomycin, and dexamethasone. The excised mass was sampled for anatomic/histological assessment. Macroscopically, the left mammary gland presented 37,6 cm in length, 36 cm wide and gross weight 0,6 kg. The right gland presented 48 cm in length, 43,5 cm wide and gross weight 1,6 kg. The microscopic assessment revealed hyperplasia of the glandular ducts. No abnormalities resembling malignant mammary neoplasms or degeneration were observed. The surgical procedure was successfully accomplished without any perioperative complication. The animal recuperated satisfyingly and surgical wound healed completely within the first 7 days post-operation. The goat was not culled and returned to normal reproductive activity. Within 3 months of follow-up, the animal was able to perform normal reproductive activity and successfully conceived 3does.

**Keywords:** Gynecomastia, mammary gland, goat anesthesia, Saanen goat, mastectomy.

## Presurgery Animal Condition



Figure 1. (A) A three-year-old male Saanen goat was observed by local farmer having a spontaneously developing udder. The animal owned optimal phenotypic characteristics for the Saanen breed; (B) Due to the significant augmentation of the mammary glands, the goat locomotion and sexual performance had been impaired.

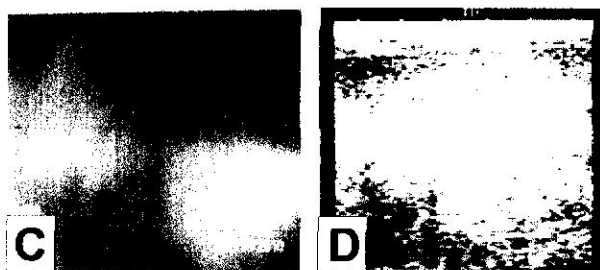


Figure 2. The goat also submitted to x-ray (C) and ultrasound examination (D), which concluded to be a solid soft tissue instead of abscess. Thoracic and abdominal radiography were also performed which revealed no evidence of metastatic disease.

## Mastectomy Procedure



Figure 3. E. The mammae was isolated from abdominal muscle using doyen clamp; F. Incision of skin was made on the 1/3 base of the mammae from abdominal layer.

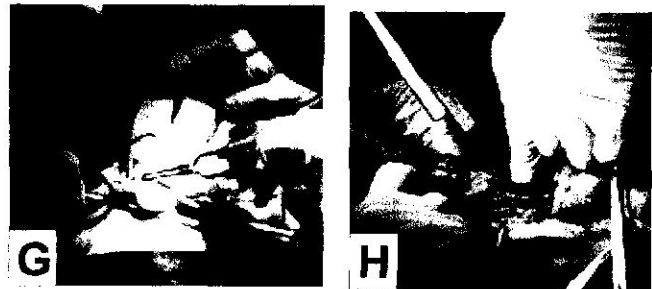


Figure 4. G. Electro-cautery was utilized to prevent excessive bleeding; H. Clamping of blood vessel and suturing were performed cautiously due to numerous active vascularization.

“Once we successfully remove the developed udder, the buck male goat is ready to show their reproductive performance. Additionally, culling high performance goats owning gynecomastia is not recommended, as long as sexual function is not impaired”



Figure 5. I. Subcuticular layer and skin closure was carried with simple sutures; J. The dissected mammary gland. The left mammary gland presented 37,6 cm in length, 36 cm wide and gross weight 0,6 kg. The right gland presented 48 cm in length, 43,5 cm wide and gross weight 1,6 kg

## References

- Smith MC, Sherman DM. 2009. Goat Medicine. 2nd edn. Hobken: Wiley-Blackwell, 896p.
- Toniollo GH, Rodrigues V, Silva MAM, Delfini A & Faria Jr D. 2010. Surgical treatment of gynecomastia in a Saanen goat. Acta Scientiae Veterinariae. 38(2): 201-204.