

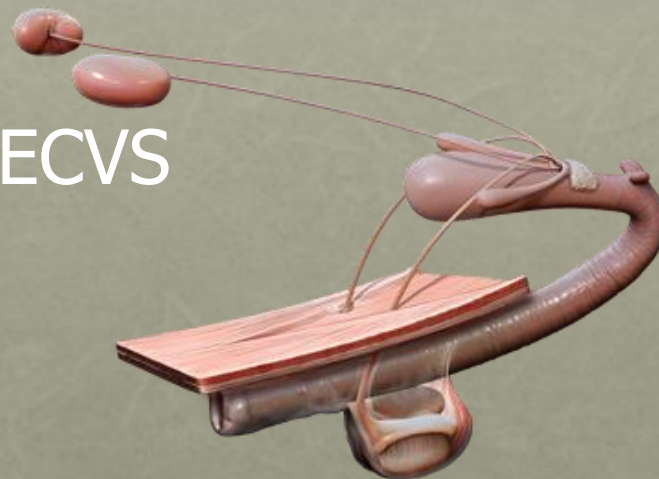


**OSPEDALE VETERINARIO**  
UNIVERSITARIO DIDATTICO FACOLTÀ MEDICINA VETERINARIA



# How to perform a phallectomy

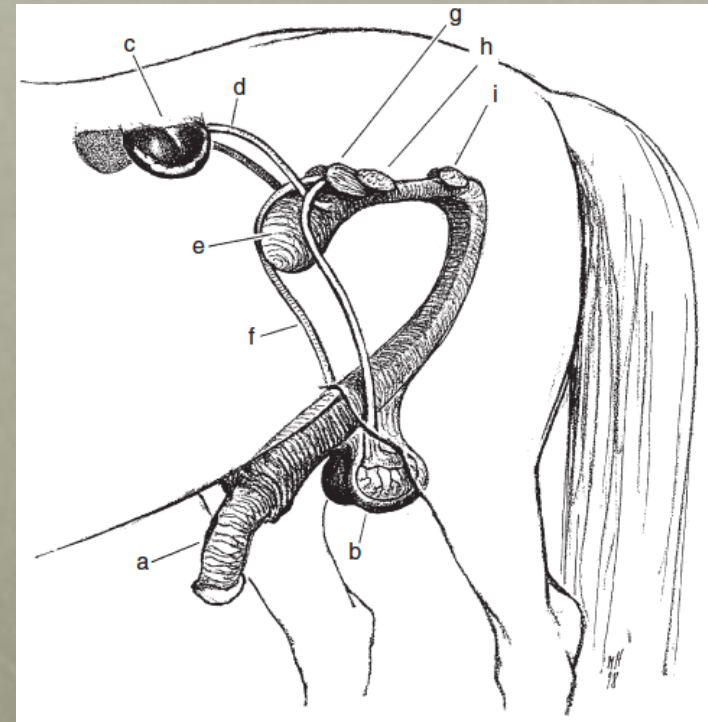
Prof. Lucio Petrizzi DVM, DECVS  
Università di Teramo





# Equine Penis

- Male copulatory organ
- Is of the **musculocavernous** type
- Three major parts
  - **root** (*radix penis*)
  - **body** (*corpus penis*)
  - **glans** (*glans penis*)
- Functionally **triad** of structures (three columns of **erectile tissue**)
  - Two *corpora cavernosa penis* (**CCP**; cavernous bodies)
  - One *corpus spongiosum penis* (**CSP**; spongy body)





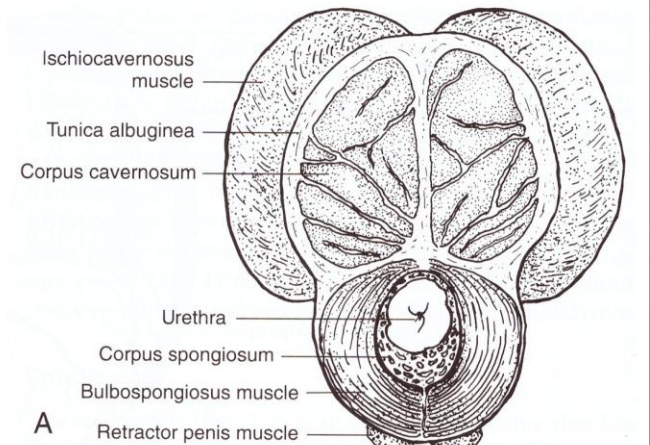
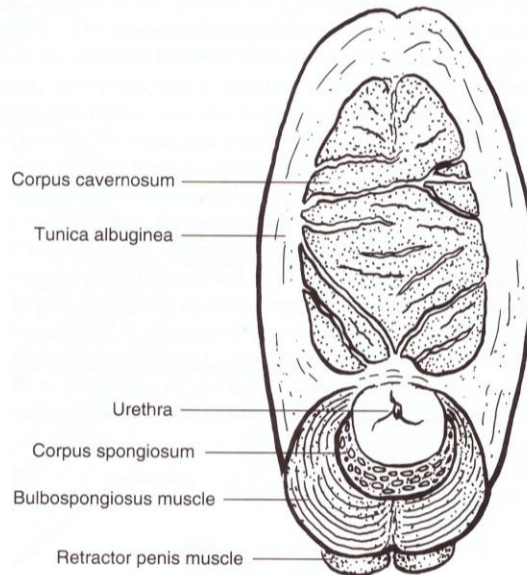
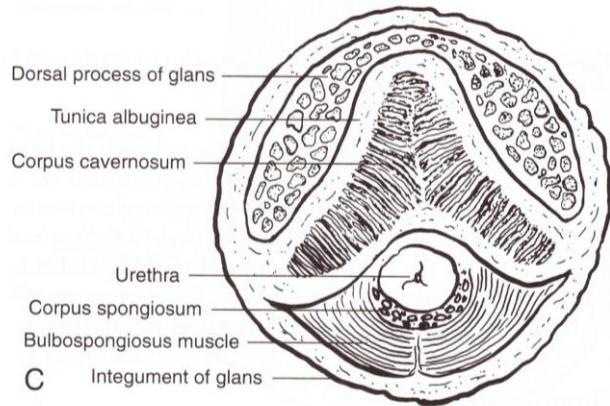
# Equine Penis

- The penis encloses the **extrapelvic portion** of the **urethra**
- Each of **two CCP** begins proximally within one of the two *crura of penis* and are fused into **one body** over most of the length of the penis
- The **CCP** forms most of the **dorsal aspect** of the penis
- The **CSP** forms a vascular tube surrounding the **urethra**, largely along the **ventral aspect** of the penis
- The **CSP** is contiguous at its cranial end with the **glans penis** and forms a slight enlargement, termed the **bulb**, at the root of the penis
- The **erectile bodies** are surrounded by the thick, fibroelastic **tunica albuginea**





# Equine Penis



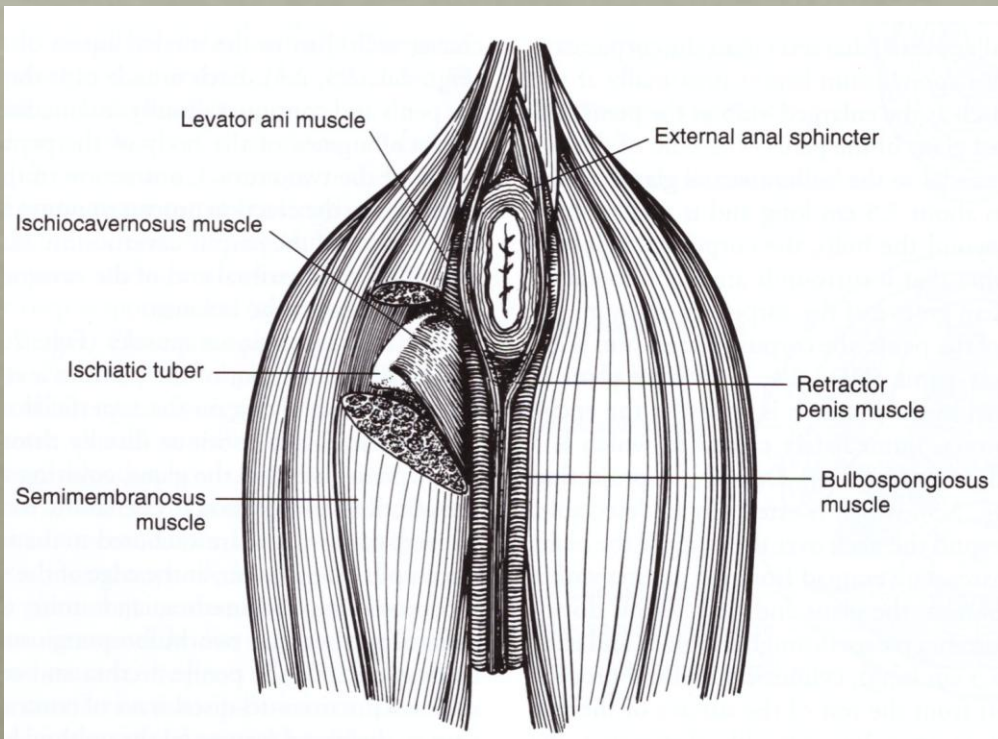


# Equine Penis

- **Muscle of the penis**
- Paired striated
  - **Ischiocavernosus**: from the tuber ischii and the adjacent part of the sacrotuberous ligament to the crura and adjacent parts of the body of the penis
  - **Bulbocavernosus**: covers the CSP ventrally and extends nearly the entire length of the penis; near the bulbourethral glands and ends at the free part of the penis near the glans penis
- Paired smooth
  - **Retractor penis**: on the ventral surface of the first few coccygeal vertebrae and pass ventrad on each side of the rectum to form a loop, the muscles pass distad along the bulbospongiosus muscle and end at the glans penis

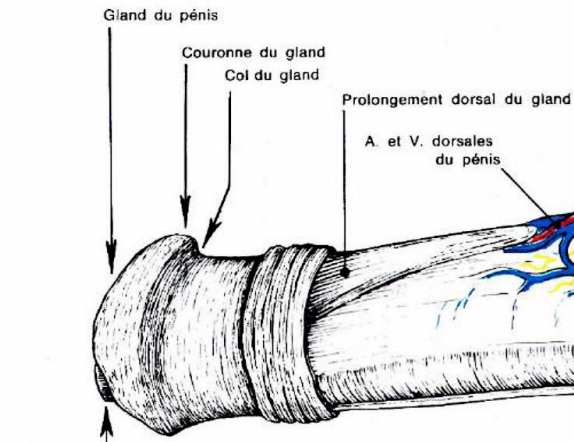
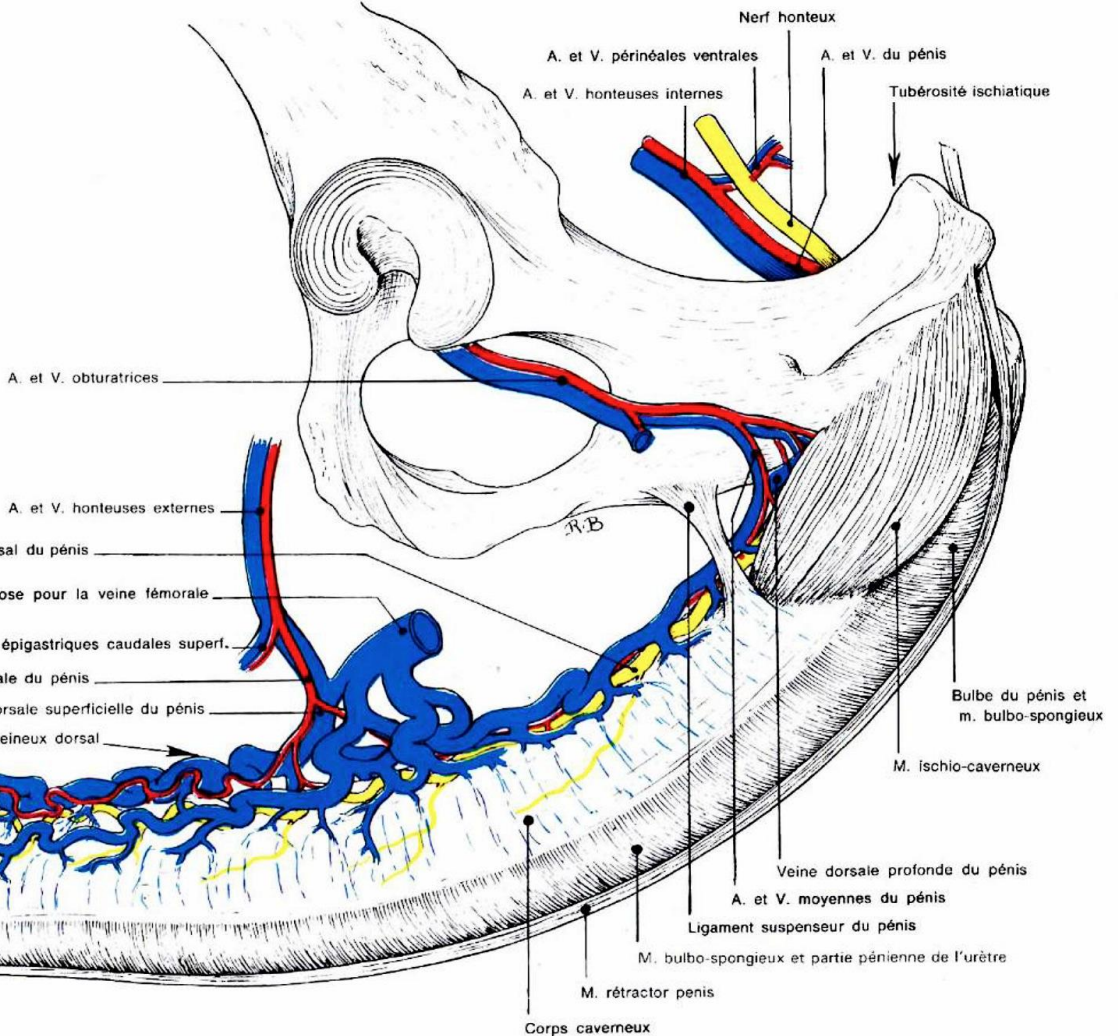
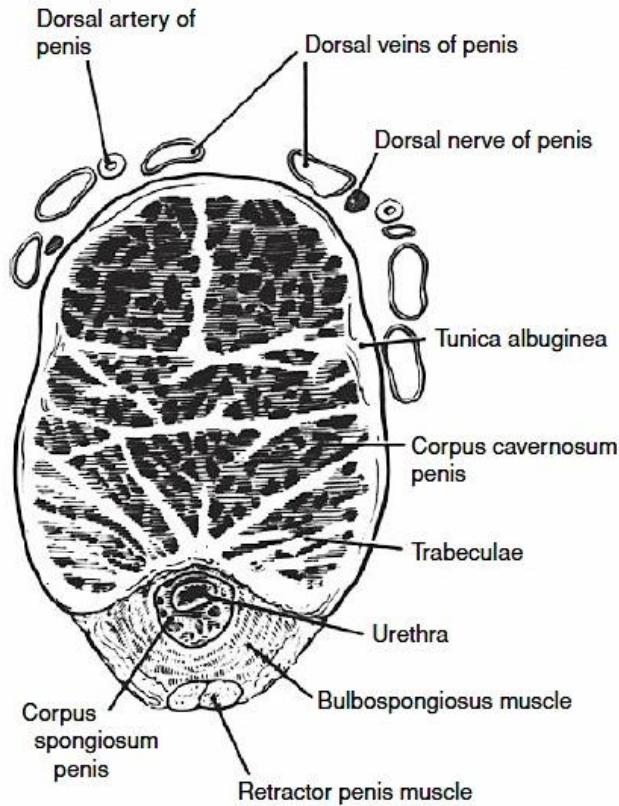


# Equine Penis





# Equine Penis





# Phallectomy

- **Indications**

- **Permanent penile paralysis** especially if the penis is irreparably damaged
- **Refractory paraphimosis or priapism**
- **Neoplastic lesions** (primarily SCC) or other masses involving the shaft of the penis
  - has invaded the tunica albuginea
  - is so extensive that more conservative treatment is impossible
- **Urethral stenosis** (distal aspect)







# Phallectomy

- **Commonly performed with the horse anesthetized and in dorsal recumbency**
  - facilitate surgery
  - **several surgical options**
- **Sometimes can be performed with the horse standing and sedated after anesthetizing the pudendal nerves or performing a ring block proximal to the site of amputation**
  - horse is poor candidate for general anesthesia
  - owners have imposed financial restrictions



# Phallectomy

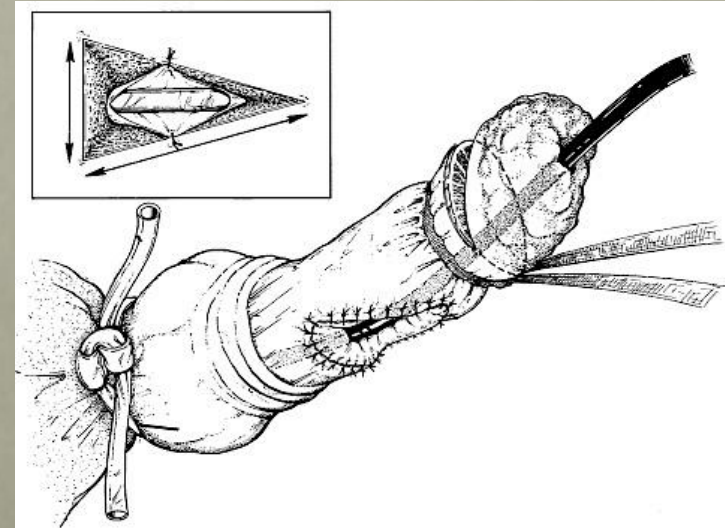
- **Regardless of technique used the surgical challenges involve**
  - **compressing the erectile tissue at the end of the stump**
  - **creating a new urethral orifice**
- **Is generally regarded as a salvage procedure in stallions**
  - **If possible a stallion should be castrated 3 to 4 weeks before**
    - **to avoid postoperative erection, which leads to hemorrhage and suture dehiscence**



# Phallectomy

## Vinsot technique

- One of the **simplest techniques**
- **Triangular urethrostomy** is made on the ventral portion of the penis removing the skin, bulbospongiosus muscle and CSP
- The triangle is oriented so the **apex point distal**
- The exposed **urethra** is incised and apposed with simple interrupted sutures
- A **tourniquet** is then placed distal to the urethrostomy and **left in place** following transaction of the distal penis







# Phallectomy

## modified Vinsot technique

### Use of a modified Vinsot technique for partial phallectomy in 11 standing horses

Carolyn E. Arnold, DVM, DACVS; Steven P. Brinsko, DVM, PhD, DACT;  
Charles C. Love, DVM, PhD, DACT; Dickson D. Varner, DVM, MS, DACT

JAVMA, Vol 237, No. 1, July 1, 2010

- The technique can be simplified
- Formation of a **linear urethrostomy**
- Application of a **penile tourniquet** using a **cattle bander castration tool** (Callicrate bander)
- By placement of the **urethrostomy** more **prossimally** greater lengths of the **penis** can be removed

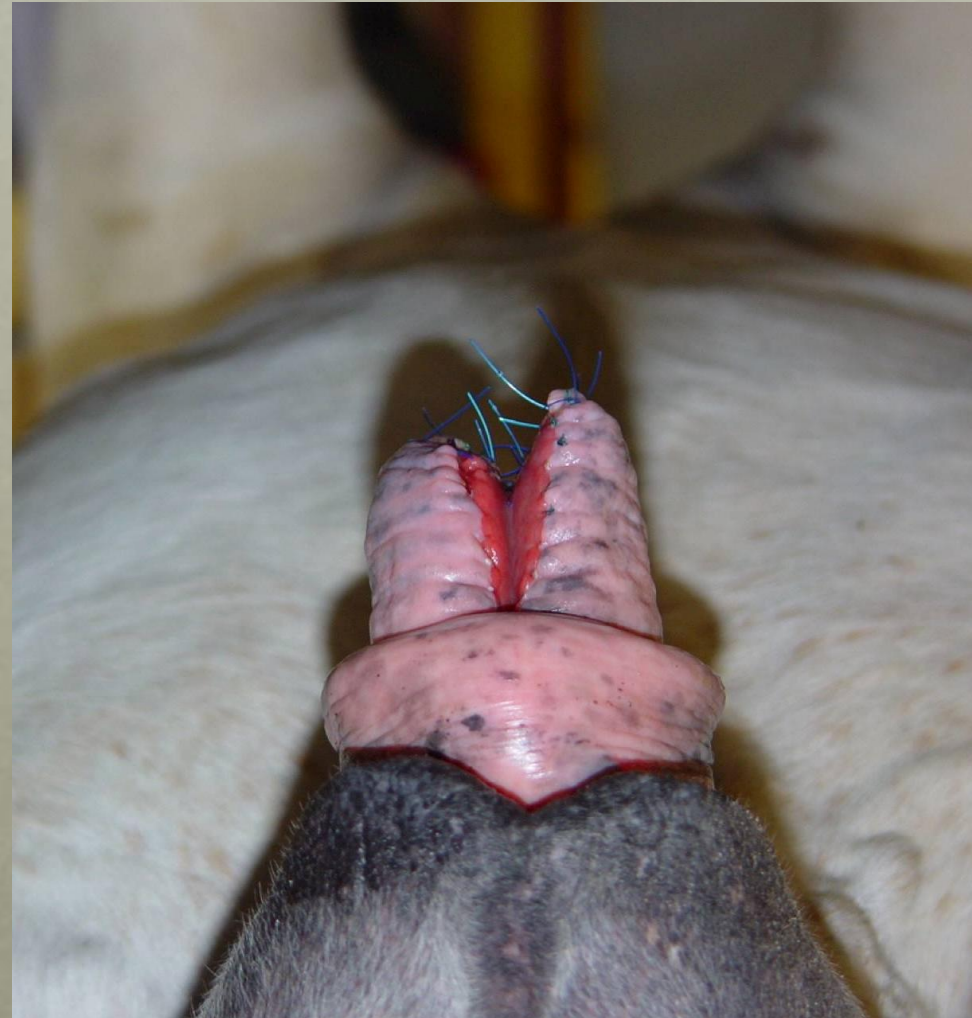




# Phallectomy

## Williams technique

- A similar **Urethrostomy** as described in the **Vinsot technique** is made
- **Triangle is reversed**: apex points proximally
- The **cavernous tissue** is **compressed** using simple interrupted sutures
- Creates a **wide urethral opening** and **reduces** the likelihood of **stricture**

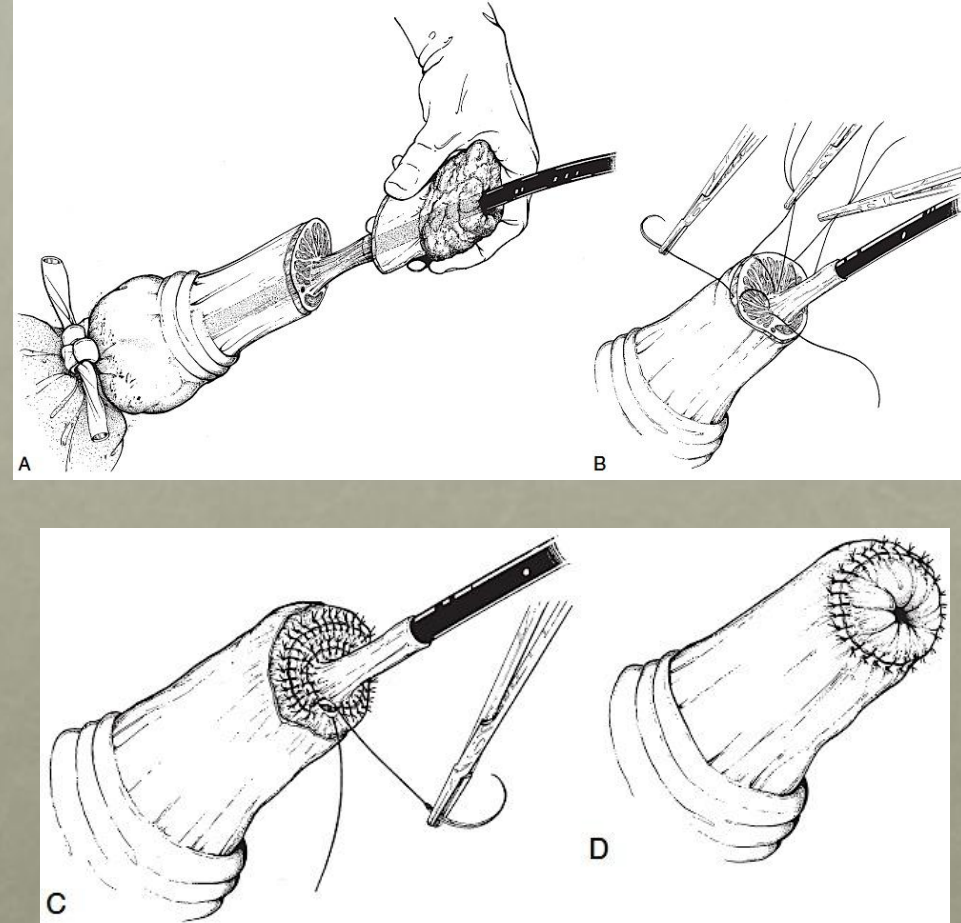




# Phallectomy

## Scott technique

- A **circumferential transection** of penis is made **sparing the urethra**
- The **cavernous tissue is compressed** using simple interrupted sutures
- The **urethra is spatulated** over the cavernous tissue in **circular fashion**







# Phallectomy

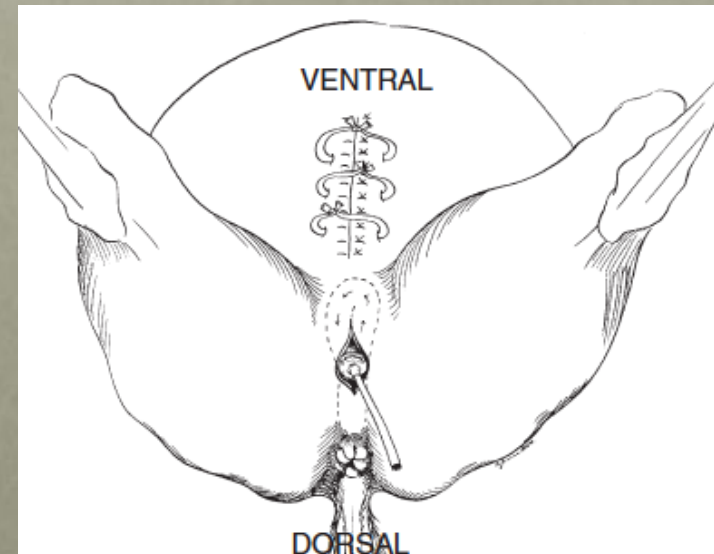
## *en bloc* resection with penile retroversion

### Genital neoplasms treated by en bloc resection and penile retroversion in horses: 10 cases (1977–1986)

Mark D. Markel, DVM; J. D. Wheat, DVM; Kathy Jones, DVM

JAVMA, Vol 192, No. 3, February 1, 1988

- The penile shaft is amputated
- The stump of the penis is retroverted through a 6-cm subischial incision approximately 20 cm ventral to the anus
- The ventral aspect of the urethra is incised longitudinally and sutured to the surrounding edges of the incised subischial skin





# Phallectomy

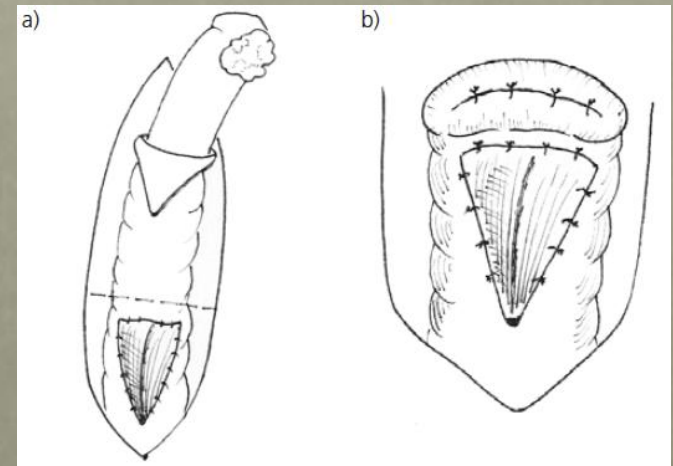
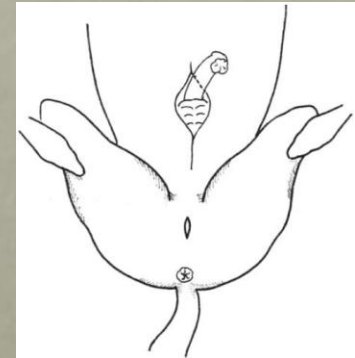
*en bloc* resection with penile retroversion

## *En bloc* resection of the penis in five geldings

D. C. ARCHER\* AND G. B. EDWARDS

EQUINE VETERINARY EDUCATION  
*Equine vet. Educ.* (2004) **16** (1) 12-19

- The technique was similar to that described by Markel *et al.*, 1988
- Instead of spatulating the urethra a **triangular urethrostomy** was created
- The **base** of the triangle oriented **distally** (William's technique)





# Phallectomy

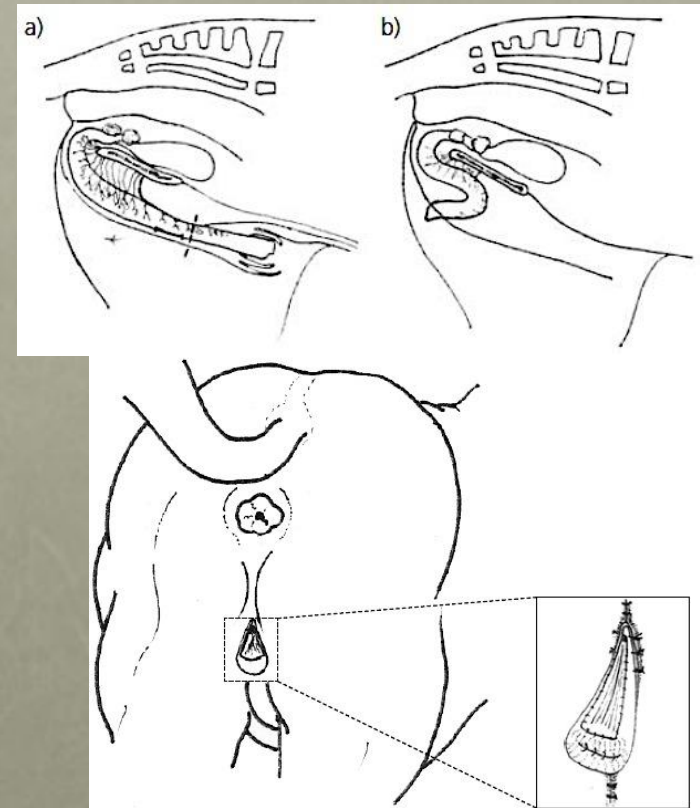
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- The penis was freed proximally using **blunt dissection**, enabling the distal portion of the penis to be **retroflexed 180°**
- The triangle was positioned so that **urine flow** would be directed **caudoventrally** from the urethrostomy site after retroversion







# Phallectomy

*en bloc* resection with penile retroversion

## **Penile retroversion and partial phallectomy performed in a standing horse**

J. D. PERKINS, J. SCHUMACHER,  
R. W. WAGUESPACK, M. HANRATH

*Veterinary Record* (2003)  
153, 184-185

- First report
- It is suggested that retroversion of the penis and partial phallectomy can be performed safely with the horse in a standing position when excision of regional lymph nodes is not required





# Phallectomy

*en bloc* re

## Penile Amputation and

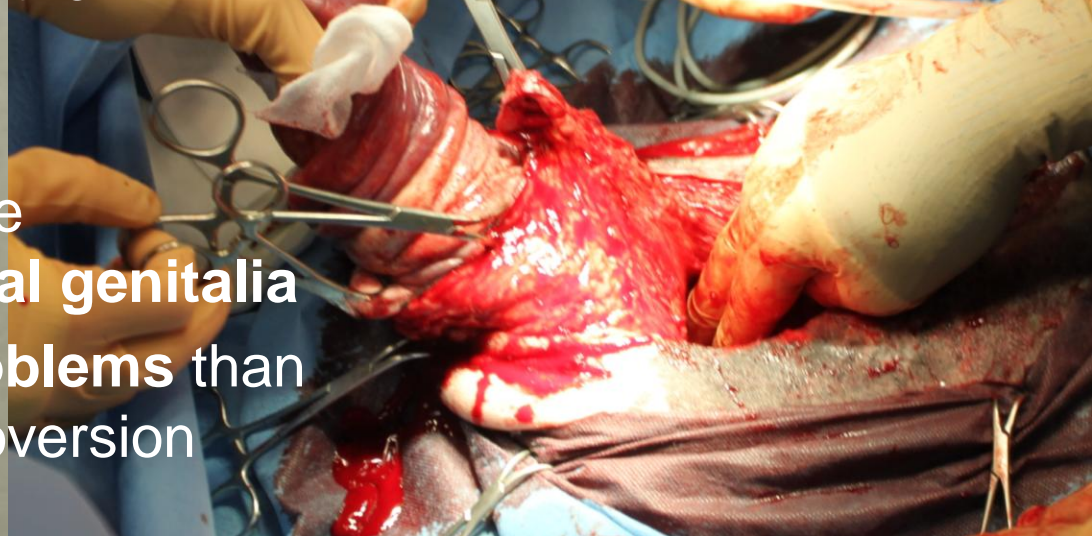
JIM DOLES, DVM, JOHN W. WILL

- Described a technique of the penis with pexy abdomen and revision preputial skin
- Less **soft tissue dissection**
- Less radical change in the appearance of the **external genitalia**
- Fewer **post operative problems** than *en bloc* resection and retroversion



ry Surgery  
-331, 2001

ate ACVS







# Phallectomy

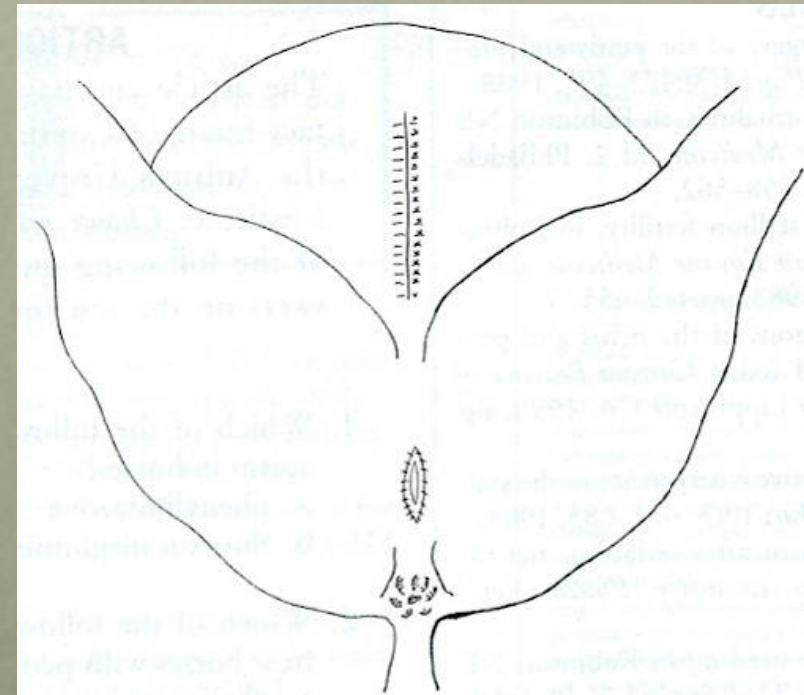
*en bloc* resection without penile retroversion

## Penile Surgery in Horses

Philip D. van Harreveld, DVM  
Earl M. Gaughan, DVM  
James D. Lillich, DVM, MS

*The Compendium* August 1998

- Amputation of the penis at its proximal end
- Creation of a permanent perineal urethrostomy
- Resection is continued to a position on the midline approximately 20 cm ventral to the anus
- No case contribution







# Phallectomy

*en bloc* resection without penile retroversion

**A modified surgical technique for penile amputation and preputial ablation in the horse**

EQUINE VETERINARY EDUCATION  
*Equine vet. Educ.* (2016) 28 (5) 269-275

C. E. Wylie and R. J. Payne\*

- **Subischial urethrostomy and penile amputation with preputial ablation, for the treatment of different severe pathologies in 15 horses**
- **First subischial urethrostomy**
- **Then en bloc-subtotal penis and prepuce excision**
- **Success rate 64.3%, alive after more than 18 months**





# Phallectomy

*en bloc* resection without penile retroversion

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C. E. Wylie and R. J. Payne\*

- A section of the **penis root and body** was left **in situ** rather than being retroflexed as described elsewhere
- **Penile retroversion** may be an unnecessary step
- **Amputation of the penis as proximally as possible**







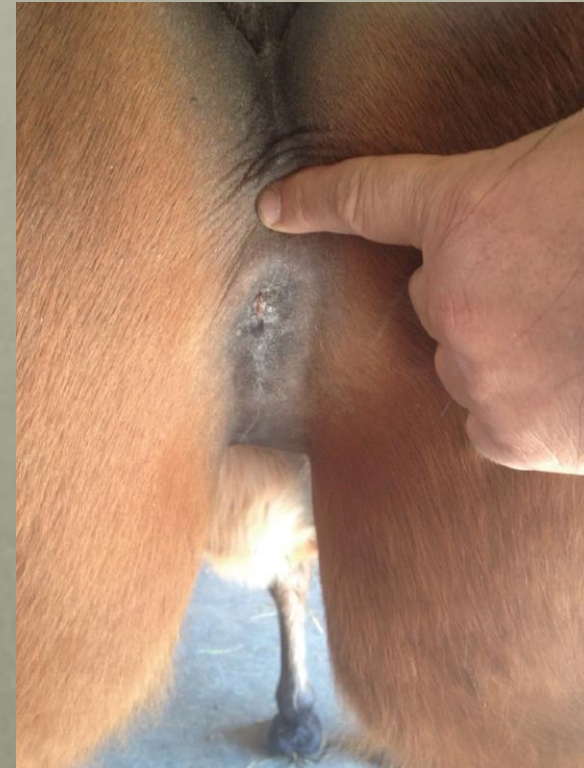
# Phallectomy

*en bloc* resection without penile retroversion

**Long-Term Outcome of *En Bloc* Extensive Resection of the Penis and Prepuce Associated with a Permanent Perineal Urethrostomy in a Gelding Affected by Squamous Cell Carcinoma**

Case Reports in Veterinary Medicine  
Volume 2016, Article ID 6989450, 5 pages  
<http://dx.doi.org/10.1155/2016/6989450>

**Paola Straticò, Vincenzo Varasano, Gianluca Celani, Riccardo Suriano, and Lucio Petrizzi**







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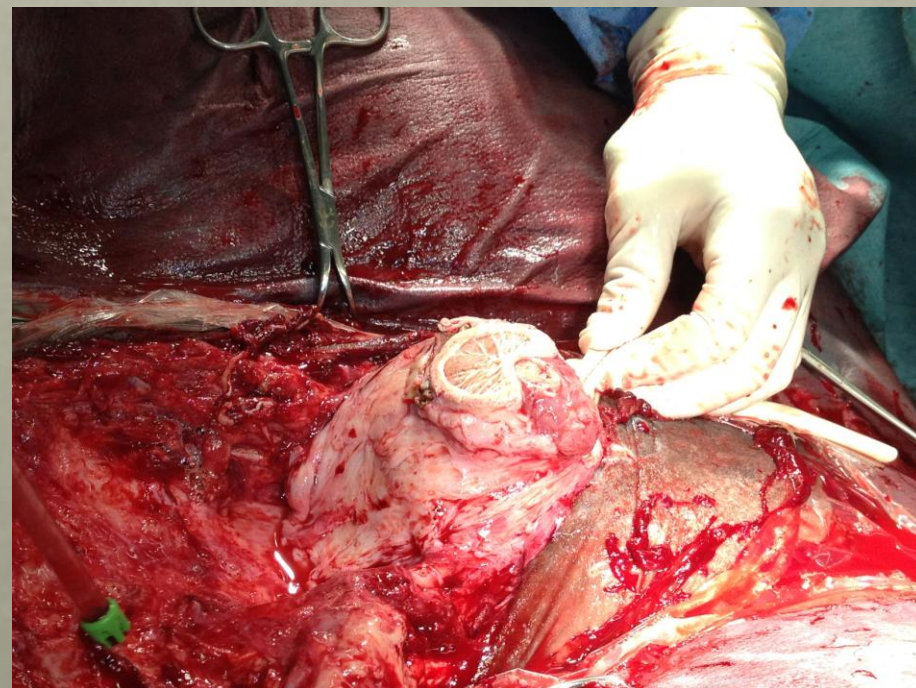
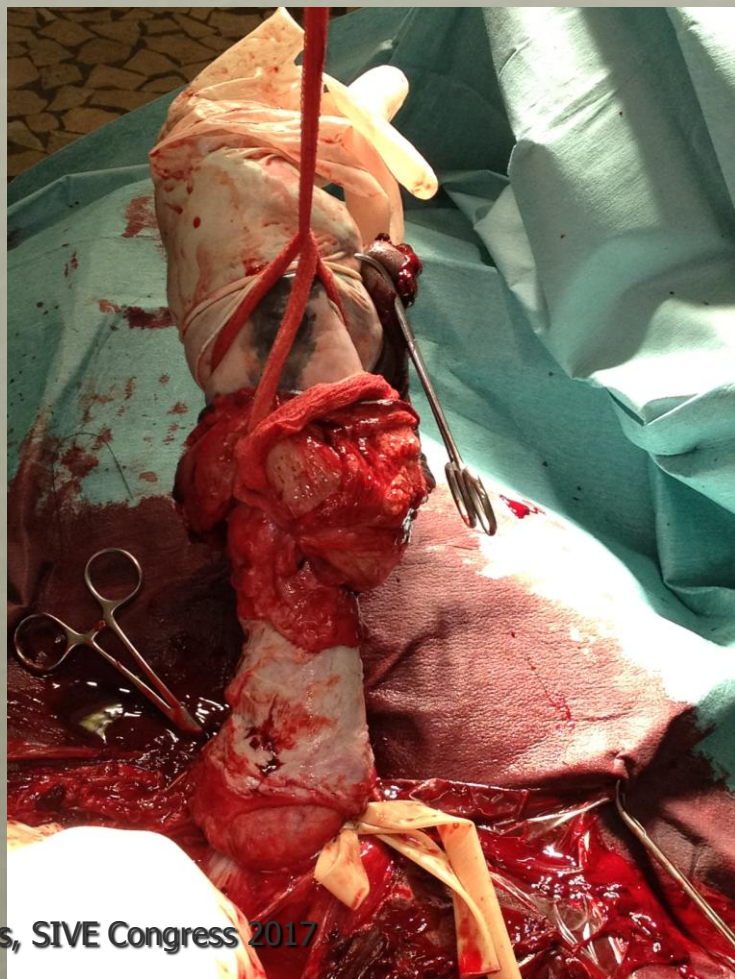






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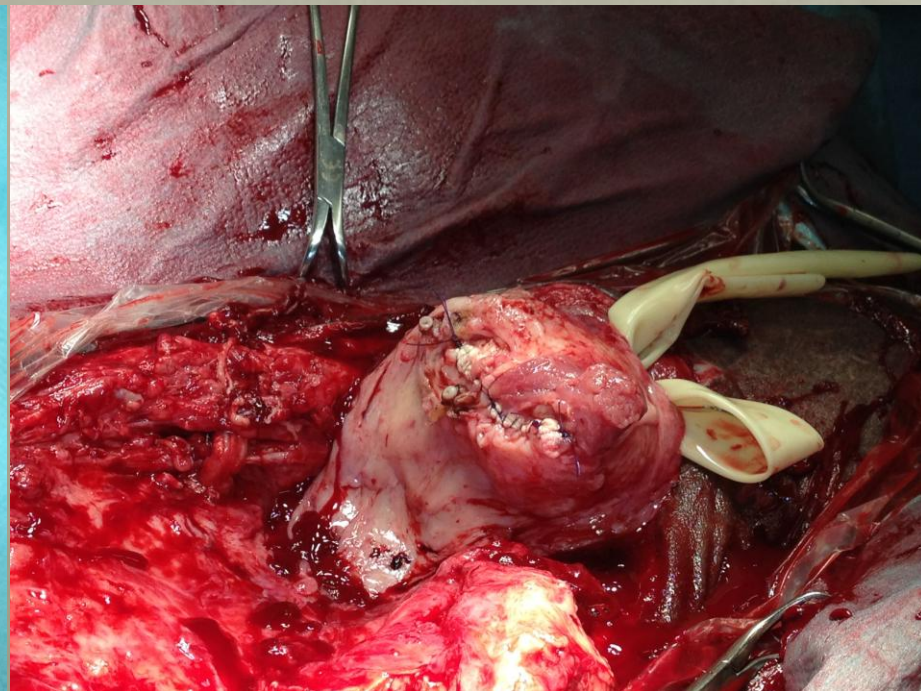
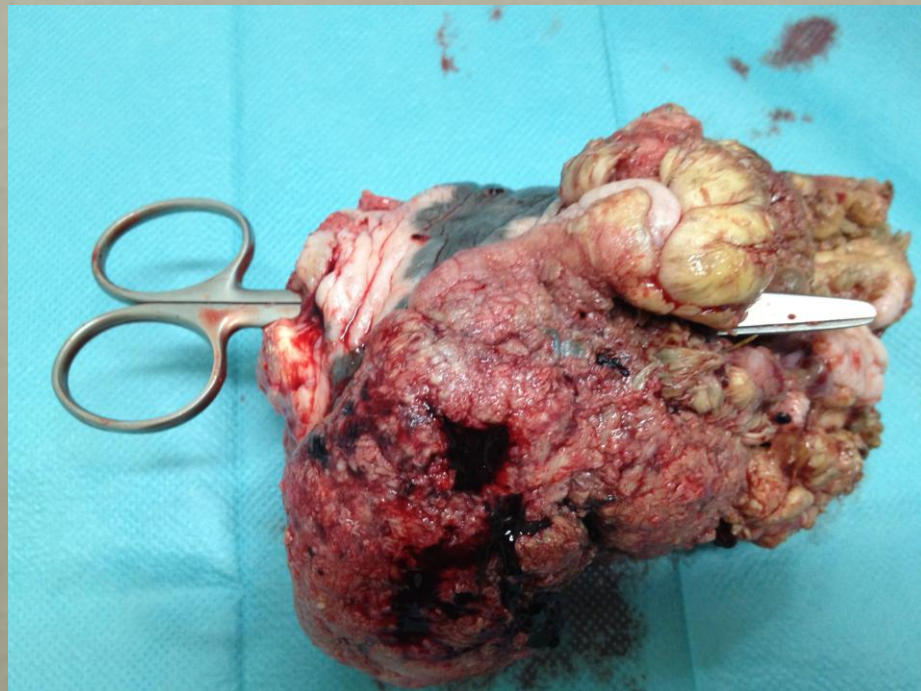






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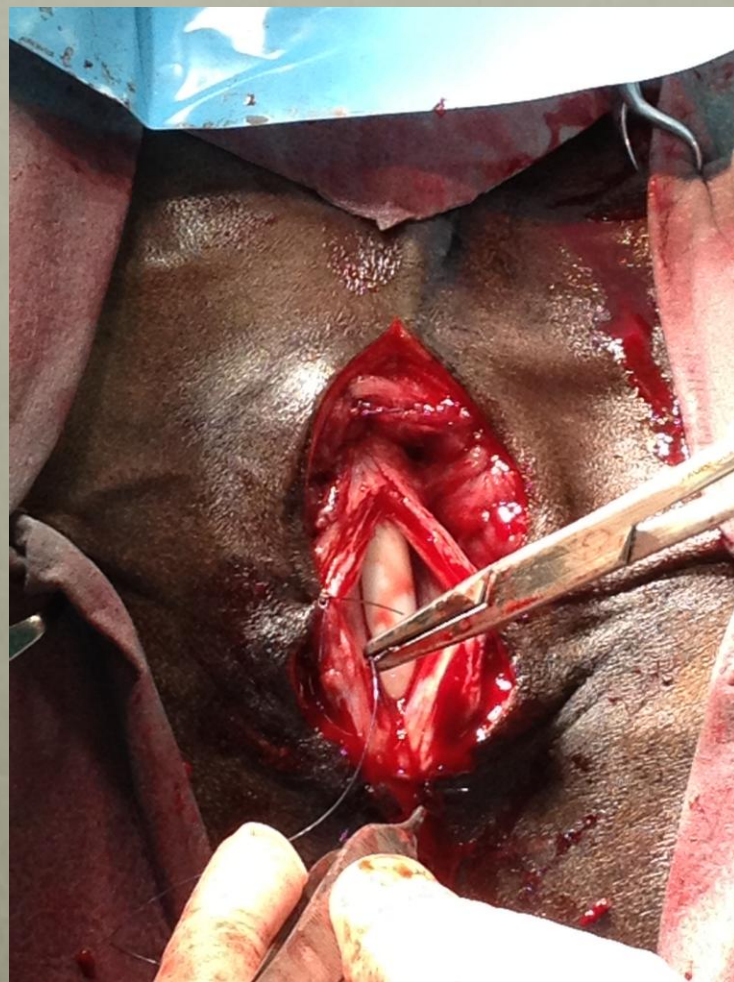
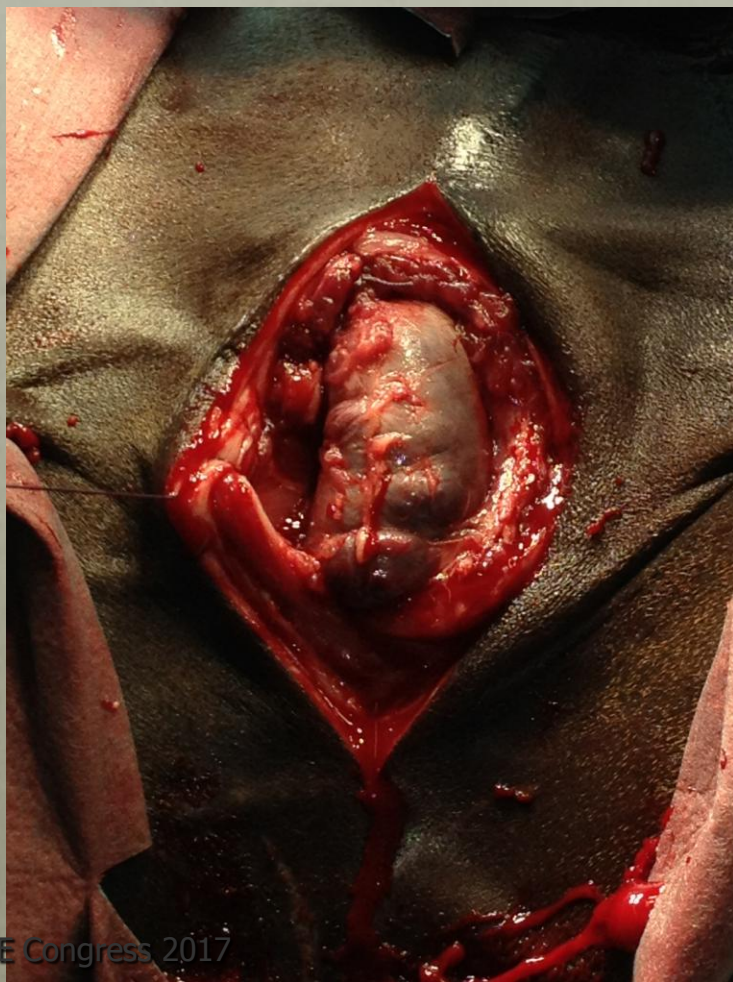






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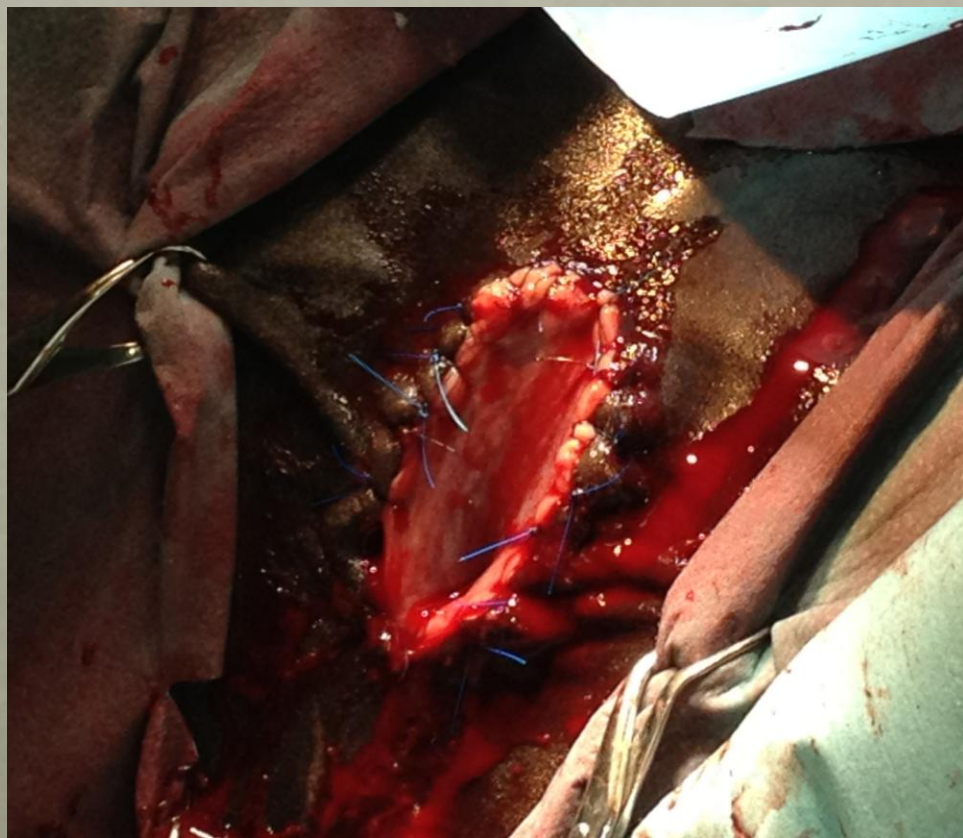






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# Long-Term Outcome of *En Bloc* Extensive Resection of the Penis and Prepuce Associated with a Permanent Perineal Urethrostomy in a Gelding Affected by Squamous Cell Carcinoma

## Vantaggi

- Escissione subtotale pene e prepuzio
- Possibilità variare il livello dell'amputazione e della stomia a seconda del grado di interessamento dell'asta
- Escissione linfonodi inguinali
- Riduzione rischi recidive







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**Grazie per  
l'attenzione!**