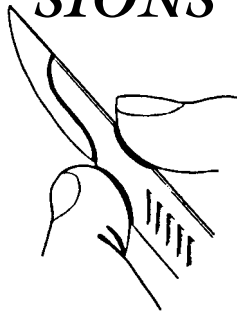


DIMENSIONS IN SURGERY



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*Dimensions in
Surgery is now in
its 18th year.*

Scrotal Urethrostomy

EMPHASIS:

In most cases, calculi which are lodged in the urethra at the base of the os penis can be flushed into the bladder by retrohydro-pulsion, avoiding the need for surgery on the delicate and highly vascular tissues of the urethra. If this technique fails, then urethrotomy is typically successful.

In some patients (notoriously male Dalmatians with urate calculi), recurrent obstructions occur despite medical management. In these patients, a scrotal urethrostomy should be considered, permanently creating a stoma, such that calculi which would otherwise obstruct the urethra will be passed without difficulty. Less common indications for scrotal urethrostomy include urethral stricture (often due to previous surgery of this area), or neoplasia requiring phallectomy (penile amputation).

Although perineal urethrostomy is the standard procedure in cats, in dogs this is more likely to cause urine scald. In most cases, scrotal urethrostomy will provide excellent results. In this paper, we will describe the technique.

PREOPERATIVE DIAGNOSTICS:

1. Physical examination.
2. Minimum database: CBC, serum chemistry profile and urinalysis.
3. Radiography:
 - a. Two-view abdominal radiographs.
 - b. Contrast cystourethrogram: to rule-out concurrent abnormalities such as urethral or cystic neoplasia (which could cause similar signs to those produced by calculi).
4. Abdominal ultrasonography if warranted.
5. Urine bacterial culture and sensitivity.

PREOPERATIVE CARE:

AXIOM: *If a ruptured bladder, with secondary sepsis or shock, is present then standard medical management to stabilize the patient should be immediately instituted. Surgery should be performed as soon as the clinician feels that the medical manage-*

ment has achieved its maximum efficacy.

1. Indwelling cephalic catheter.
2. Intravenous anesthetic induction protocol.
3. Endotracheal intubation and inflate cuff.
4. Isoflurane inhalant anesthesia to effect.
5. Lead II ECG and pulse oximetry monitoring during prep and surgery.
6. Place an indwelling urinary catheter.
7. Clip and prep the ventral abdomen and scrotal region for aseptic surgery.
8. Cefalexin 20 mg/kg IV immediately preoperatively.

SURGICAL TECHNIQUE:

1. If the patient is intact, castration must be performed.

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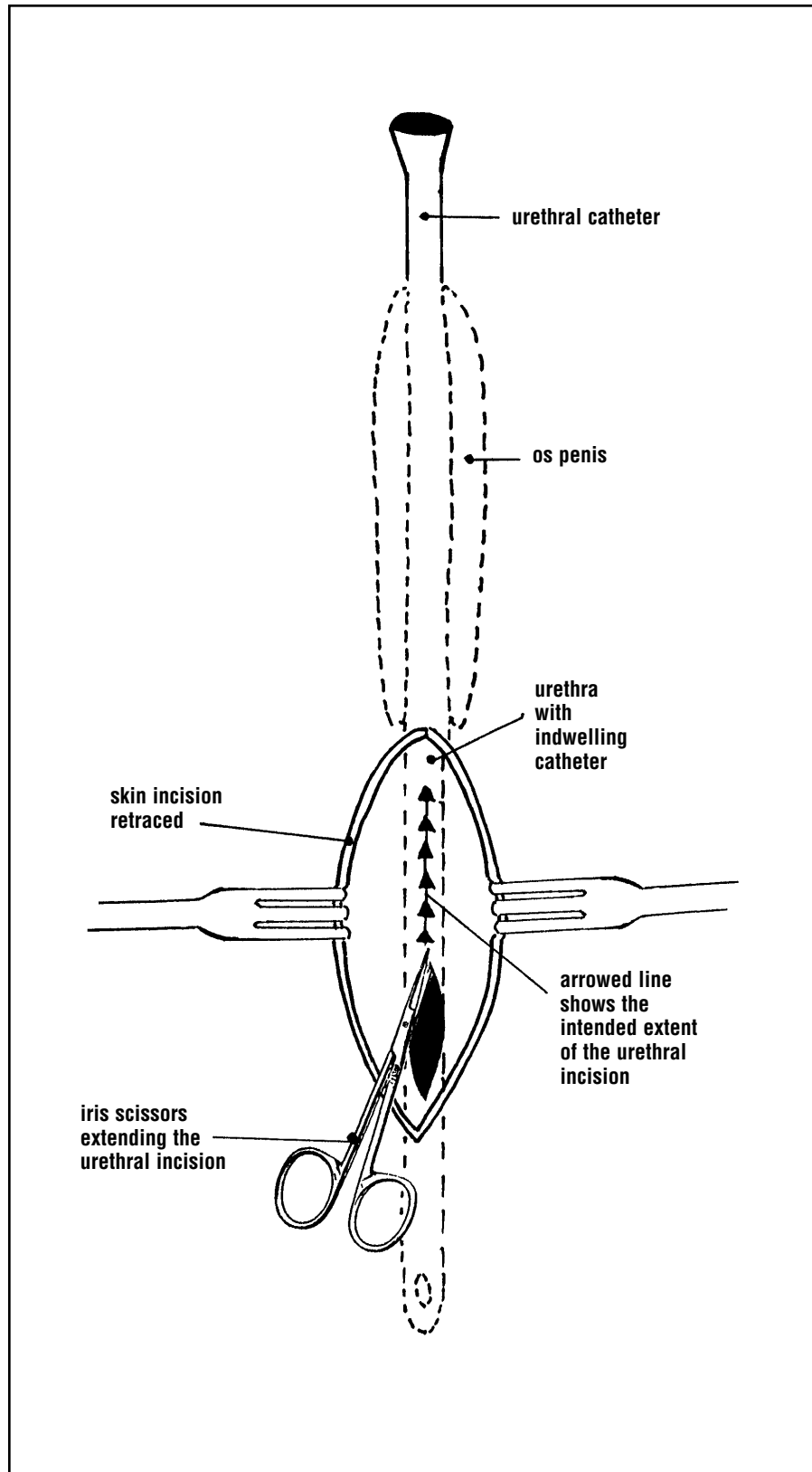


Figure 1: This schematic drawing depicts the initial skin incision and the urethral luminal incision.

2. Excise the full thickness of any remaining scrotal tissue.
3. Incise the subcutaneous tissue overlying the urethra, over a 3 cm. distance, extending caudally from the caudal edge of the os penis.
4. Excise the retractor penis muscle, which runs along the ventral aspect of the urethral midline.
5. Make a small incision over the urinary catheter, on the midline.
6. Using iris scissors, extend this incision into the urethral lumen, along the midline, over a 3 cm. distance (See Figure 1).

AXIOM: Using a scissors, rather than a scalpel, facilitates making the incision precisely on the ventral midline; particularly in small patients, the scalpel tends to slip towards one side or the other.

7. Commencing at one end of the incision, using monofilament 4-0 suture material, appose the urethral mucosa to the skin in a simple continuous pattern.
8. Repeat this step on the opposite side of the incision to complete the closure (See Figure 2).

POSTOPERATIVE CARE:

1. Antibiotic treatment based on urine culture results.
2. No indwelling urinary catheter is required.
3. Elizabethan collar.
4. Pain management using injectable, oral, or transdermal analgesics.
5. Suture removal 2 weeks postoperatively, with patient sedated.

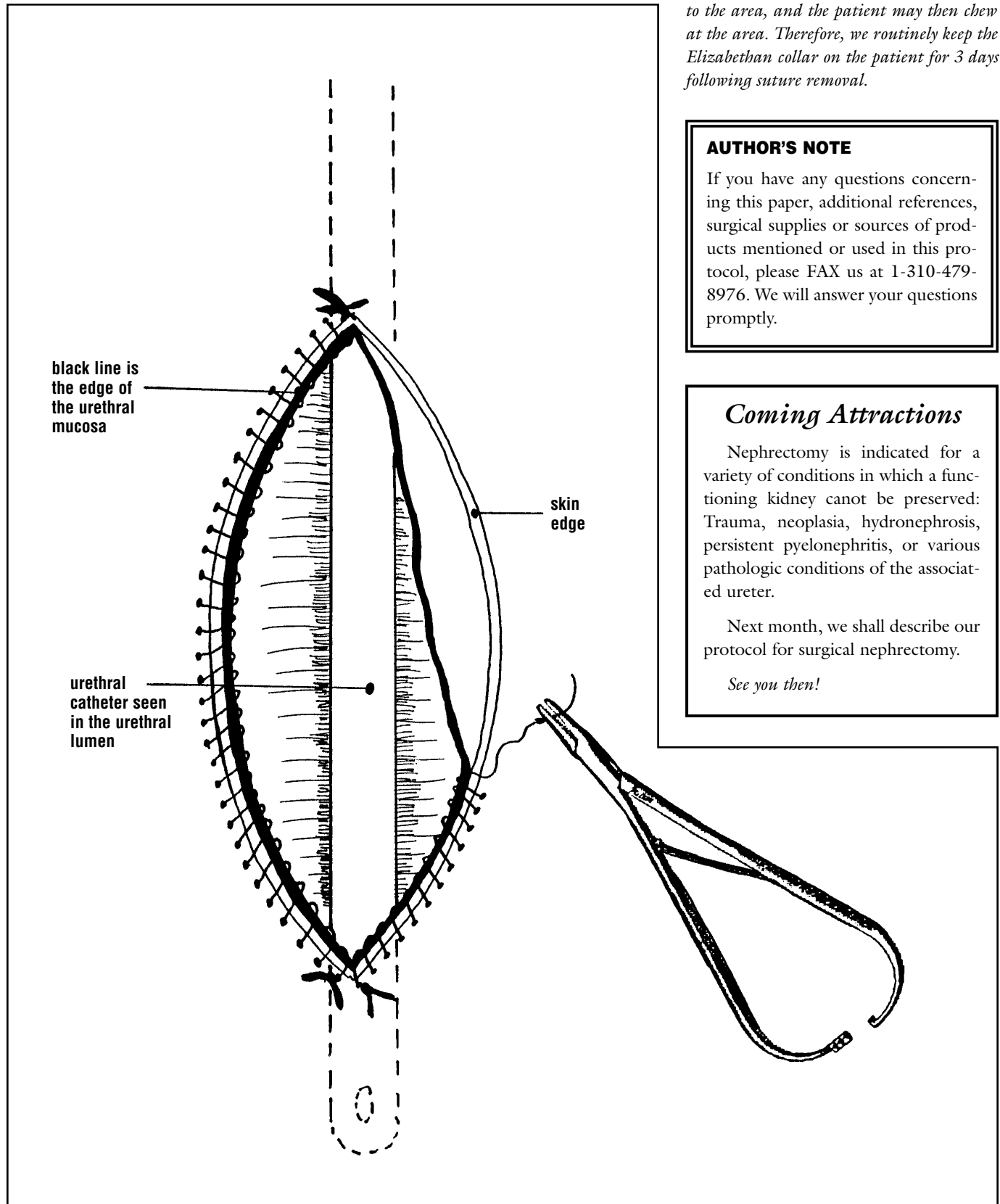
DANGER:

Attempting to remove these delicate sutures in a non-sedated patient is likely to cause trauma to the surgical site.

AXIOM: Often, the process of removing the sutures will cause some slight inflammation

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to the area, and the patient may then chew at the area. Therefore, we routinely keep the Elizabethan collar on the patient for 3 days following suture removal.

AUTHOR'S NOTE

If you have any questions concerning this paper, additional references, surgical supplies or sources of products mentioned or used in this protocol, please FAX us at 1-310-479-8976. We will answer your questions promptly.

Coming Attractions

Nephrectomy is indicated for a variety of conditions in which a functioning kidney cannot be preserved: Trauma, neoplasia, hydronephrosis, persistent pyelonephritis, or various pathologic conditions of the associated ureter.

Next month, we shall describe our protocol for surgical nephrectomy.

See you then!

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