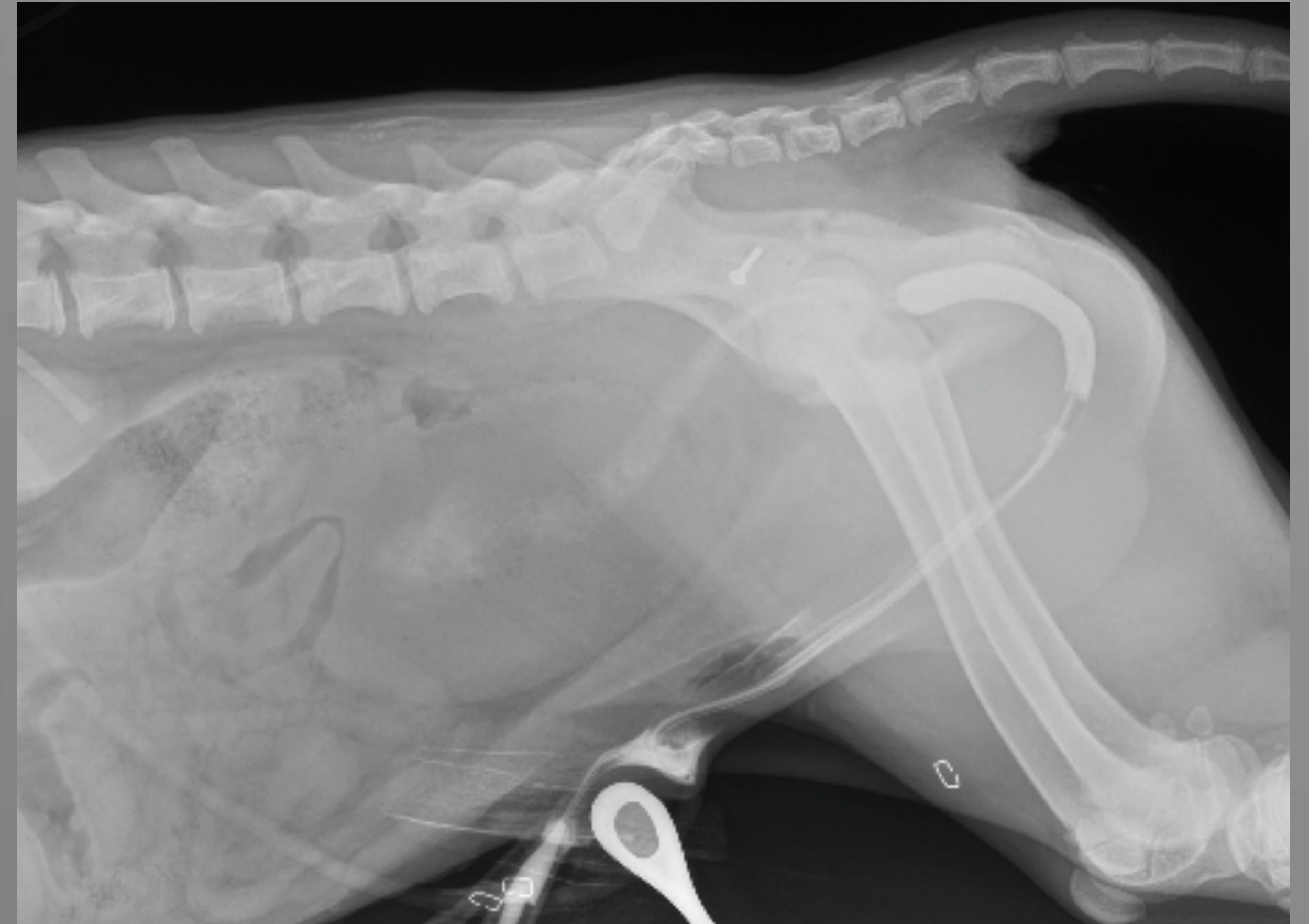


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**Introduction:** The most common cause of urethral trauma in dogs (70%) is vehicular trauma and pelvic trauma. In male dogs, urethrostomy can be performed at prescrotal, scrotal, perineal, and prepubic location. The site of the urethrostomy depends on the location of the lesion. Compared to other urethrostomy techniques, preputial urethrostomy provides a more normal route of urination, and avoids urine dribbling and skin scalding.

**Case description:** A 5-month-old intact male English Setter was referred for urethral stenosis 2 months after a vehicular trauma. Initially, the dog presented multiple pelvic fractures and a right coxo-femoral luxation, but normal urination. Ten days later, the dog was presented for absence of urination. Urethral catheterization was repeated daily until it became impossible. A cystostomy tube was placed. At 2 months after the initial trauma, the physical examination was within normal limits. Abdominal ultrasound revealed a severe proximal urethral edema, severe urethritis and a urethral stenosis immediately caudal to the prostate. Penile urethra was within normal limits. Positive retrograde cysto-urethrography confirmed a 1cm urethral stenosis between the prostatic and pelvic urethra, and a penile urethra within normal limits (Fig 1). Retrograde urethroscopy was performed but catheterization and ballooning dilatation were impossible. An urethrostomy was decided.



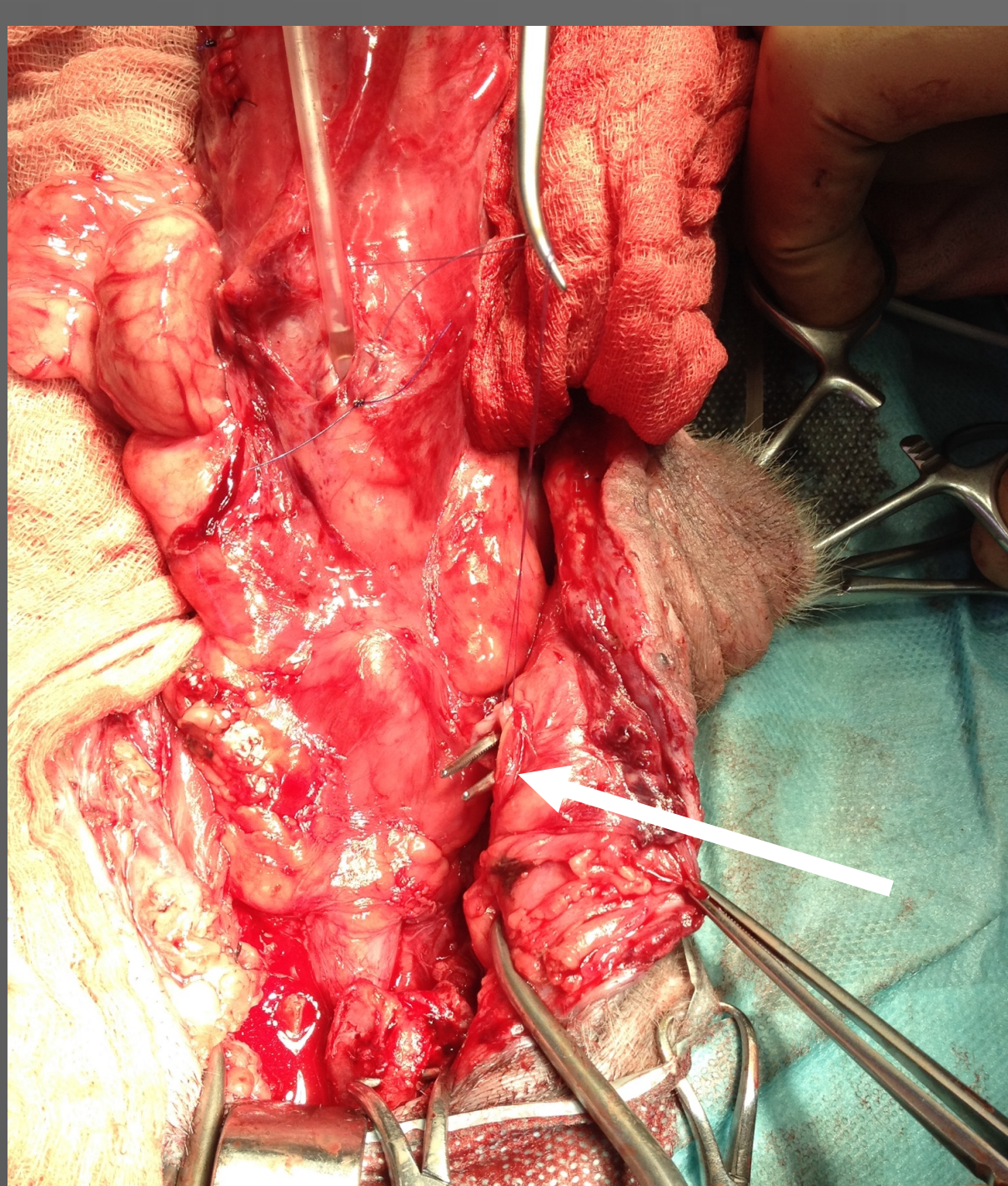
**Figure 1**  
Positive retrograde cysto-urethrography : distension of the caudal pelvic urethra (9mm), 1cm urethral stenosis and a penile urethra within normal limits.

The dog was anesthetized and placed in dorsal recumbency. A caudal ventral midline abdominal incision was performed, with a right parapreputial skin incision. The urethra caudal to the prostate was freed from its pelvic attachments and was transected as caudal as possible, proximal to the urethral stenosis. Two stay sutures were placed at the distal end of the transected urethra. A mosquito forceps was introduced into the prepuce and pushed against the dorsal part of the preputial sac. The dorsal preputial sac was incised along the forceps (Fig 2). A urinary catheter was placed through the preputial incision into the proximal urethra (Fig 3). The transected urethra was spatulated and pulled out the abdominal cavity through the midline incision and sutured to the preputial mucosa around the catheter in a simple interrupted pattern (Fig 4 and 5). The ventral abdominal incision, subcutis and skin were closed in a traditional fashion. The urethral catheter was left in place (Fig 6).

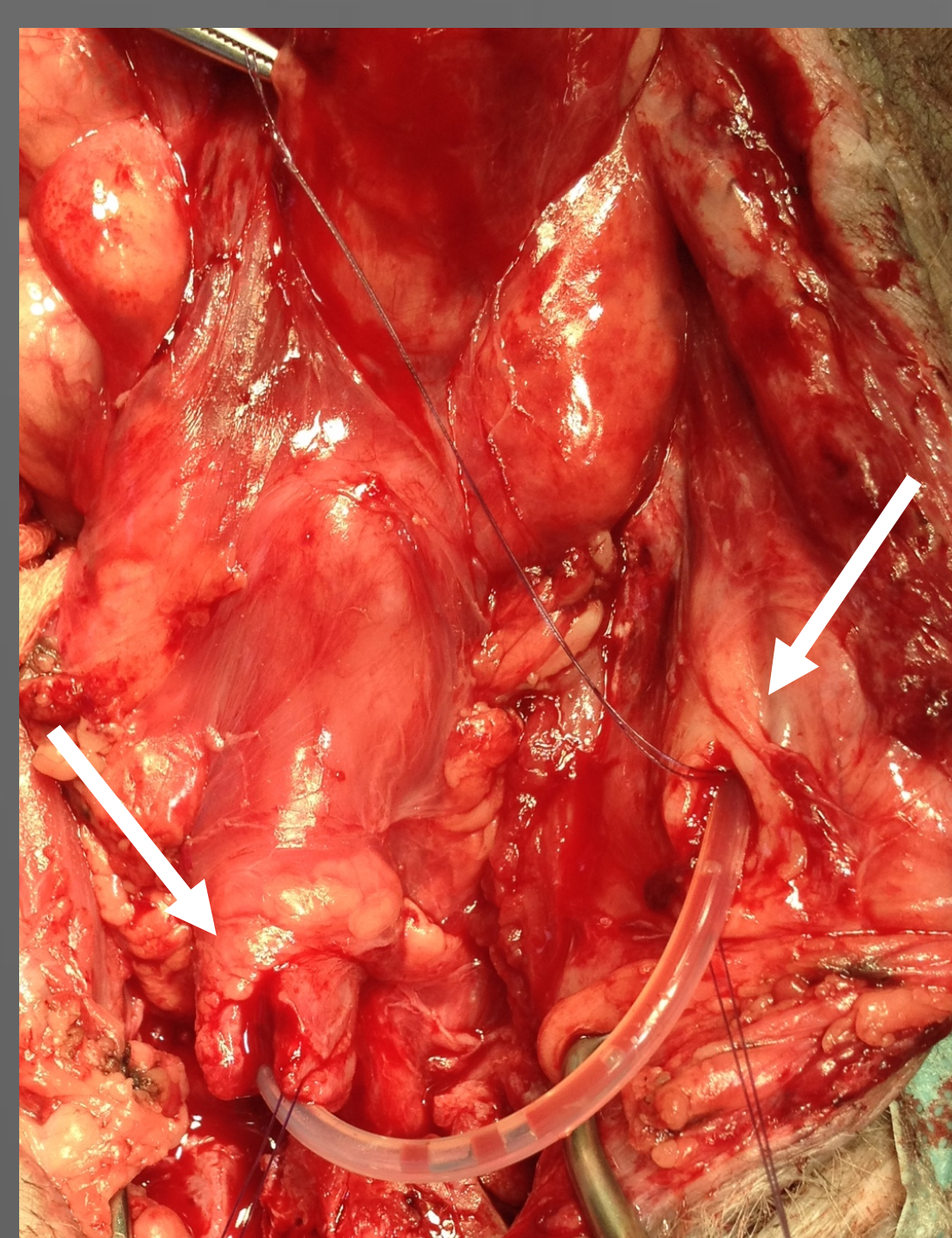


**Picture 1** Normal post-operative miction

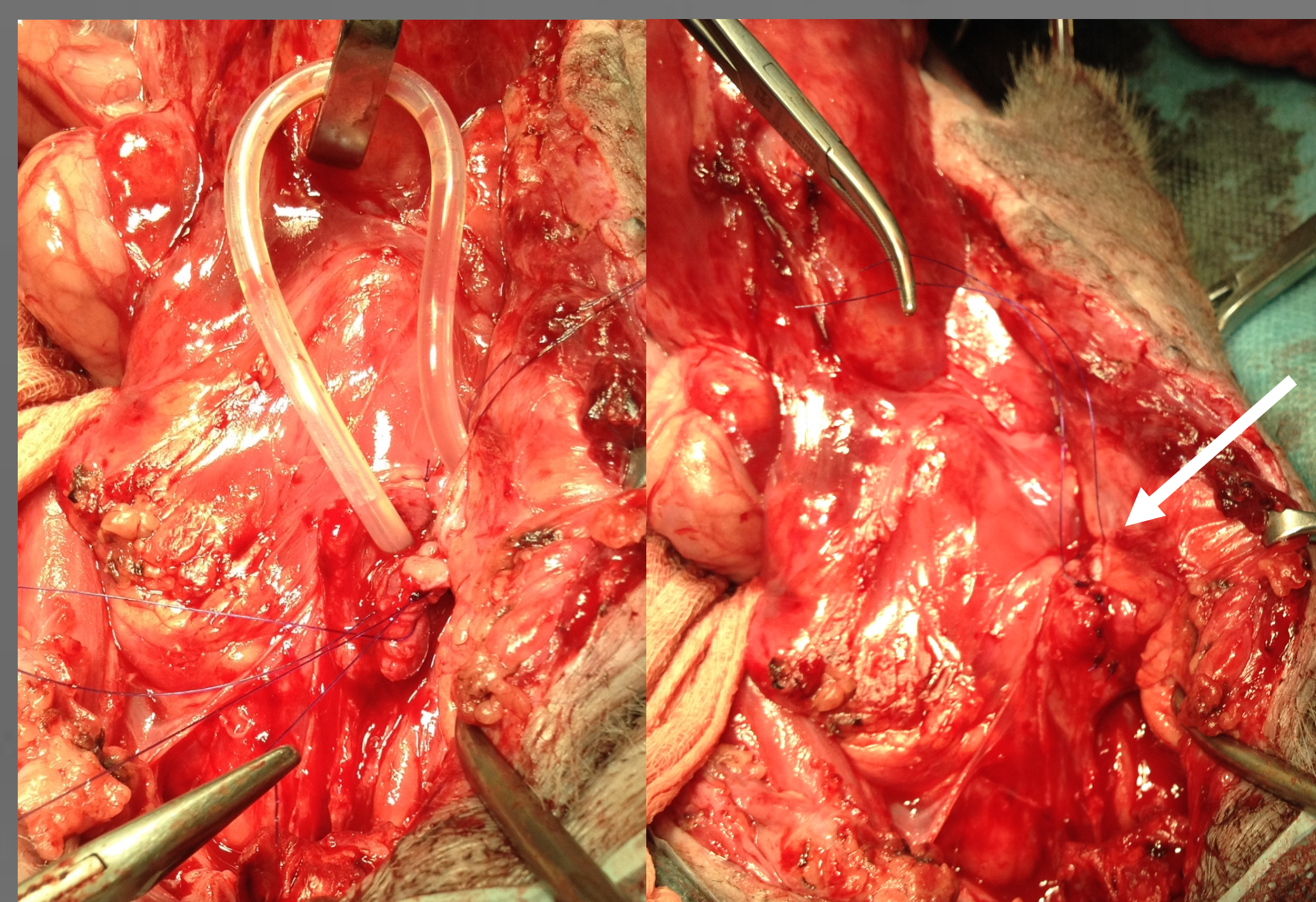
**Results:** The urethral catheter was removed 3 days after surgery. The dog presented normal urination (Pic 1) and was discharged. Twenty-six months after surgery, the owners reported normal urination and no sign of stranguria, hematuria, dysuria or incontinence.



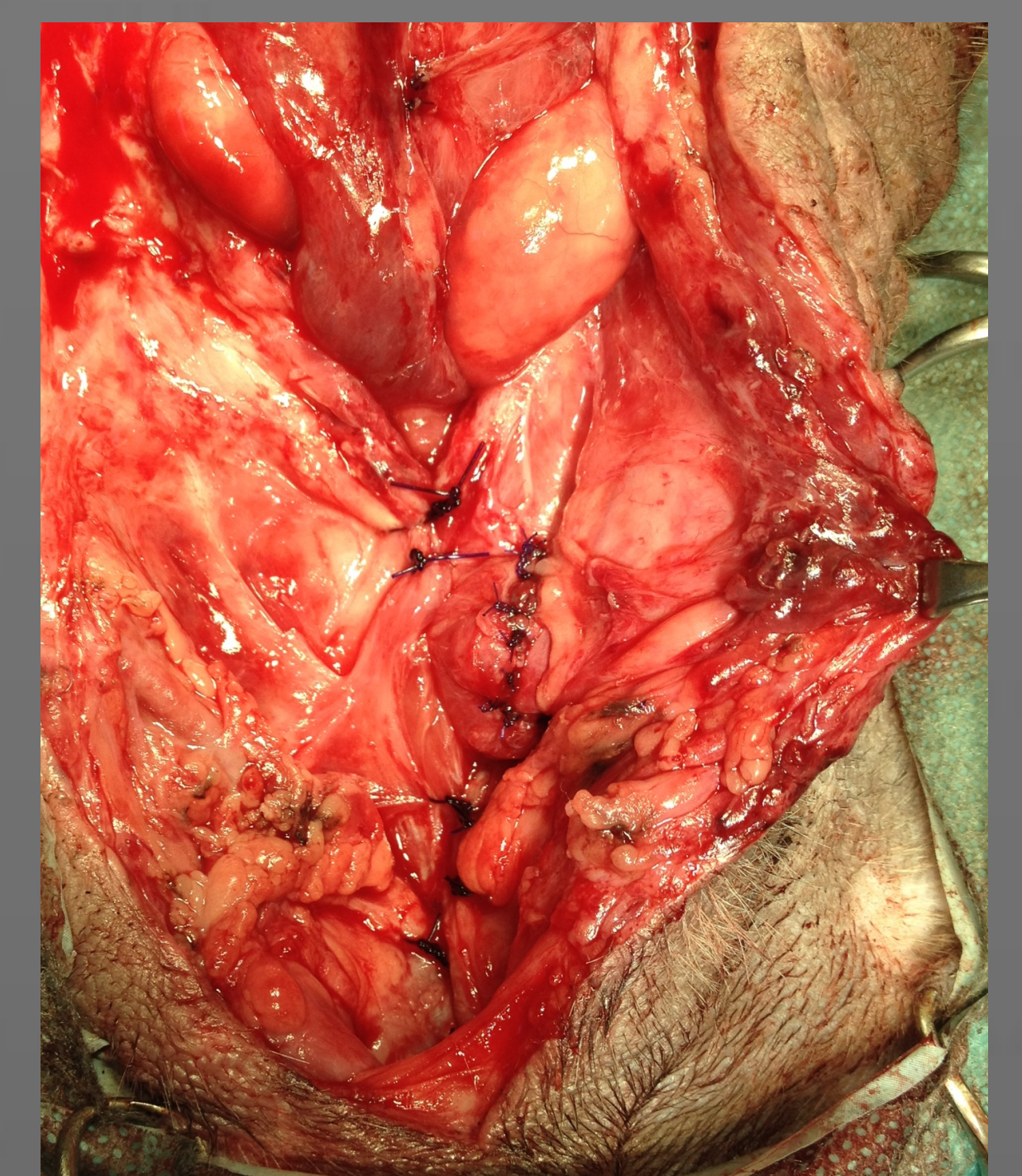
**Figure 2**  
A forceps was introduced into the prepuce and pushed against the preputial sac. The dorsal preputial sac was incised along the forceps.



**Figure 3**  
A urinary catheter was placed through the preputial incision into the remnant urethra.



**Figures 4 and 5**  
The transected urethra was spatulated and pulled out the abdominal cavity through the midline incision and sutured to the preputial mucosa around the catheter in a simple interrupted pattern.



**Figure 6**  
Closure was made in a traditional fashion. The urethral catheter was left in place for 3 days.

**Conclusion:** This is the first report of preputial urethrostomy without penile amputation or external preputial incision following traumatic urethral rupture and stenosis. Compared to prepubic urethrostomy, preputial urethrostomy allows a more normal way of urination, a better cosmetic result and avoids the risks of urine dribbling and skin scalding. Moreover, compared to previously described preputial urethrostomies, this modified preputial urethrostomy is performed via a single skin incision and avoids penile amputation.