

Prepubic Urethrostomy in Male Cat - Modified Technique

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DOI: 10.31080/ASVS.2020.02.0048

Received: January 28, 2020

Published: February 18, 2020

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Abstract

Post operatively complications after the perineal urethrostomy in cat males, as obstruction of urethra, narrowing or occlusion of urethra have been documented in general practice. Salvage procedure of prepubic urethrostomy, was applied with high rate of success on 100 cases between 1992-2019. Prepubic urethrostomy is a valuable alternative of the perineal urethrostomy. Because of the risk of having a too short urethra the modified technique involved pubic symphysiotomy and dissection of intrapelvic urethra and relocation of it on the prepubic area.

Keywords: Prepubic Urethrostomy; Male; Cat

Introduction

The significant cases presented to the clinic with significant trauma of the intrapelvic urethra after unsuccessful catheterization of the urethral obstruction, urethral trauma/stricture or failed perineal urethrostomy led us to use the prepubic urethrostomy in order to save the life of the animal [1]. During the years 1992 – 2019 a number of 100 cases were treated using the modified technique. The surgery was done on stable animals only, for that reason in the study were not mentioned any other investigations (bloods, urinalysis, abdominal U/S, etc). The study was focused only to evaluate the technique in its self and its limits among to other techniques only on stabile patients. The pubic symphysiotomy was applied in order to obtain a longer urethra [2] which provided us enough length of urethra to be fixed to the skin reducing considerable the risk of damaging of urinary bladder's sphincter followed by different degrees of incontinence [3].

Materials and Methods

The study included 100 castrated cat males or entire which underwent perineal urethrostomy or suffered damage of the intrapelvic urethra.

Surgical technique: The cat is placed in dorsal recumbency and clipped and aseptically prepared for a celiotomy. A ventral celiotomy [4] is made from the umbilicus and is continued with a pubic symphysis osteotomy and ends with the prepuce (Figure 1). With a thin osteotome the pubic symphysis is opened and pelvic conduct exposed (Figure 2). Using blunt dissection, the urethra is mobilized

from the pelvic canal alongside with the penis (Figure 3). The urethra is mobilised and placed cranially to the pubis bone. The pubis symphysis is closed using one or two cerclage wire [5]. Urethra is cut close to prostate or caudal to prostate but in this case, prostate is removed as much as possible. First suture point of the celiotomy will be close to the pubic symphysis. Urethra will lay on this suture. Next starting point of closing the celiotomy will be about 8-10 mm apart to that first suture and the celiotomy is closed routinely. The end of urethra is cut longitudinally that half will be placed cranially and half caudally (Figure 4). The urethral mucosa is sutured to the skin with 1.5 - 1 M monofilament suture material using a simple interrupted suture pattern (Figure 5). The subcutaneous tissue and skin is closed in a routine manner (Figure 6) [6]. In 50 cases cystotomy was performed and the urinary bladder was lavaged with isotonic saline solution for washing out all of the small uroliths. The bladder was closed in 2 layers with 1.5 - 1 M monofilament suture material using a simple interrupted suture pattern.



Figure 1: Line of incision.

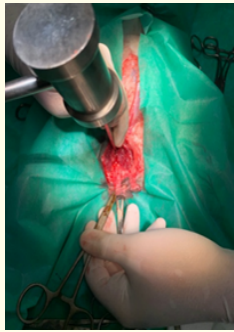


Figure 2: Pubic osteotomy.

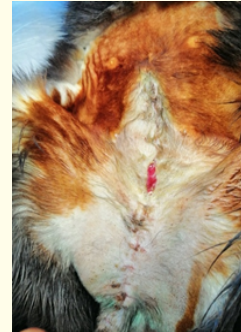


Figure 6: Three weeks post operatively.

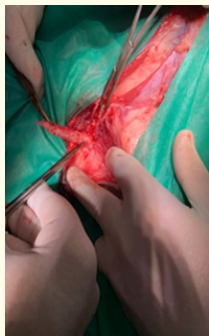


Figure 3: Blunt dissection of urethra.



Figure 4: Urethra cut longitudinally.



Figure 5: Final aspect of the Urethrostomy.

Results and Discussion

Results after this prepubic urethrostomy were very good [7]. The results were 0% incontinence, 5% stoma strictures all caused because of very poor postoperatively care of the owner at home and 2% skin necrosis around the stoma in two extremely overweight cats with poor self-grooming, 0% of leakage of the urine under the skin at the urethrostomy sutures and 0% urinary tract infection during first 2 years post operatively.

All cases returned to the clinics from where they were referred and we received periodically the feedback regarding the patient evolution. Unfortunately, after approximately 2 years, many cases were lost but approximately 30% of them remained in contact with their practice for at least 5-8 years.

Conclusion

The prepubic urethrostomy with pubic symphysiotomy offers an excellent alternative to the classic technique reducing the post-operatively complication mentioned in literature

Clinical Relevance

Prepubic urethrostomy with pubic symphysiotomy is a comparatively a complex procedure that should be considered as a salvage technique for obstructive disease of the pelvic urethra.

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