Perineal urethrostomy

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closed indwelling catheter system [8]. Avoiding laceration of the urethra and accurately apposing the urethra to the skin prevent this problem. Necrosis of the urethra and skin is prevented by gentle tissue handling and avoiding tension on the suture line. When the mucosa is traumatized by repeated catheterization, an indwelling catheter, or uroliths, it is more prone to tearing by tissue forceps and suture material. An indwelling soft Foley catheter may be necessary for a few days. Long-term indwelling catheters should be avoided after surgery, however, because of the risk of stricture formation and ascending urinary tract infection [9–12].

Postoperative bacterial cystitis is a common complication in patients with perineal urethrostomy [11,13–15]. The explanation for this complication is not completely known. Several reasons have been suggested, and some have been investigated. The use and misuse of indwelling catheters have been shown to increase the risk for ascending urinary tract infection [9,12,16]. The urethral stoma, with the larger urethral opening and its closer proximity to the anus, may predisperse the cat to bacterial contamination of the lower urinary tract. With the removal of the penile urethra, a part of the urethral mucosal barrier is removed. It has been reported that perineal urethrostomy using the Wilson and Harrison technique may cause impairment of striated muscle urethral sphincter function as measured by urethral pressure profilmometry and electromyography, thereby increasing the frequency of ascending urinary tract infection [17]. In a subsequent study, Griffin et al. [18] recommended sharp dissection and incising the ischiocavernosus and ischiourethralis muscles with a scalpel blade to avoid damage to the urethral branches of the pudendal nerve coursing ventral and medial to the insertions of these muscles. A later study reported that neither sharp nor blunt intrapelvic dissection significantly alters the postoperative urodynamic status in male cats based on their sphincter electromyography studies. Furthermore, because the pelvic plexus and pudendal nerve lie dorsal to the urethra, aggressive dissection may impair lower urinary tract function. By preserving the dorsal aspect of the urethra’s attachment in the extensive dissection technique, normal lower urinary tract function is maintained [19]. Because lower urinary tract contamination and infection occur after perineal urethrostomy and may be subclinical, it is important to monitor patients using urinalysis and culture testing and to treat with the appropriate antimicrobial drugs.

Stricture of the urethral stoma (Fig. 3) is the most difficult postoperative complication to manage. The stricture develops because of excessive granulation and scar tissue formation around the opening. Several factors have been proposed as causes, including inflammation, suture tension, poor skin-to-urethra apposition, inadequate mobilization of the penis and pelvic urethra, self-trauma, and indwelling urinary catheters [8,11,12]. Strictures are best prevented by using good surgical technique, avoiding postoperative catheters, and using collars to prevent excessive licking and self-trauma. Extensive surgical experience with a good urethrostomy technique is the best way to minimize stricture formation. Once stricture occurs, corrective surgery