ABSTRACTS

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Surgical treatment of ureteral ectopia and intrapelvic urinary bladder in 9 neutered bitches

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OBJECTIVES AND METHODS: Congenital ureteral ectopia is an abnormality in which one or both ureters terminate at a position other than the urinary bladder trigone. This condition is the most frequent reason of early (since birth or weaning) urinary incontinence in dogs (1). In such cases early surgical correction of ureteral ectopia is required. In cases of delayed surgical intervention permanent urinary incontinence, recurrent urinary tract infections and hypoplasia of the urinary bladder can be noticed (1, 2). Little is known about effective treatment of neutered bitches with concurrent ureteral ectopia and intrapelvic urinary bladder. Ho et al. (1) found only 2 such patients in group of 33 dogs. These dogs were treated surgically (correction of ectopic ureters and colposuspension) without satisfactory effects (incontinence after surgery).

Nine adult neutered bitches (4.5 ± 2 years-old and 34.6 ± 6.59 kg body weight), with urinary incontinence were referred. The dogs were previously treated pharmacologically (phenylpropanolamine, estriol and some antibiotics), due to post-spaying (acquired) urinary incontinence and recurrent episodes of urinary tract infection. Such treatment brought only short-lasting remission of clinical symptoms. Identification of ureteral ectopia included the use of excretory urography and intraoperative examination. Radiographic contrast studies were suggestive of ureteral ectopia. Small intrapelvic urinary bladder was also found in all the dogs.

During surgical procedure the abdominal cavity was open by mediapubic incision. A pubic brim and prepubic tendons were also exposed. The incision was limited (mini-laparotomy) and amounted to 7 cm. For retraction of the surgical wound 2 Gelpi self-retaining retractors were used. Bilateral extramural, intramural and double ureteral openings ureteral ectopia was found in 3, 2 and 4 dogs, respectively. Extramural ureters were reimplanted in an area of the bladder trigone. Intramural ureters were stmatized at the level of the trigone. The ureters with double openings were cut and ligated below the openings visualized at the level of the trigone. Colposuspension was performed according to the technique described by Holt (2). The dogs were continent in follow-up examination 60 and 90 days after surgery. Three dogs were not presented for follow-up examination in day 90th. In excretory urography no signs of the ureteral ectopia and the intra-abdominal localisation of urinary bladder was demonstrated in all the dogs.

RESULTS: Conventional surgical approach for ureteral ectopia treatment and colposuspension in dogs, requests wide opening of abdominal cavity by incision from umbilicus to pubic symphysis (1, 2). A mini-laparotomy is an open surgery through a skin incision significantly smaller than a conventional incision (3). In current study, surgical cut was sufficient at the segment of 7 cm. Additional using of self-retaining retractors considerably increased the comfort of the performed surgeries in the restricted area. In the presented dogs the hypoplasia of the urinary bladder and it’s small capacity was probably associated with bilateral ureteral ectopia. Bladders in all young dogs are small and increase in size as an animal grows and produces more urine (2). In the treated bitches the capacity of the urinary bladder increased after correction of ectopic ureters. It was confirmed in follow-up excretory urography 60 days after surgery. A concurrent congenital anomaly in dogs with ureteral ectopia would be a short urethra (1, 2, 6). It could be a cause of intrapelvic localisation of urinary bladder in the treated dogs. The most often performed surgical treatment in bitches with short urethra is colposuspension (2). It relocates the bladder neck in an intra-abdominal position. It facilitates urinary continence, owing to the uniform activity of intra-abdominal pressure on the bladder, neck, and the proximal urethra (2, 5). After colposuspension, slight elongation of the urethra occurs (4). It can improve urine continence, owing to an increase of mechanical resistances in the urethra.

CONCLUSION: It should be remarked, that surgical correction of ureteral ectopia and colposuspension in the treated adult bitches with urinary bladder hypoplasia and it’s intrapelvic localisation were curative. The capacity of the urinary bladder could increase even in adult animals. Two such dogs treated by Ho et al. (1) were incontinent after surgery. The authors did not explain the causes of urinary incontinence in those dogs. Perhaps in those dogs the capacity of the urinary bladder did not increase enough.

On the basis of achieved effects, it can be also stated that mini-laparotomy is able to replace standard operative approach, utilized while correction of ectopic ureters and colposuspension in bitches. In case of intraoperative complications occurrence, fast conversion to conventional surgical approach is always possible.

The main limitation of the current study is relatively short-term of follow-up times. Dogs that appeared continent post-surgically may become incontinent with longer period of time (1).


