Carcinoma of the urethra is a rare finding in both man and the dog. Sticker, Hutyra and Marek, Joest, Nieberle and Cohrs, and Feldman, all of whom have reported on a large series of animal tumors, made no mention of carcinoma of the urethra in the dog. We were able to find no reference to a similar case in the veterinary medical literature.

Carcinoma of the urethra is probably as rare an occurrence in man as it is in the dog. Menville reviewed the literature to 1935 and found only 149 cases of primary neoplasms of the female urethra. Carcinoma is less frequent in the male urethra than it is in the female urethra. The most common neoplasm was the squamous-cell carcinoma, and the two most prevalent symptoms were urinary difficulty or retention and hematuria.

REPORT OF CASE

A well nourished female Boston terrier, aged thirteen years, which appeared ill, had had progressive urinary difficulties for three months. The owner stated that during this period the dog frequently had attempted to void with little or no success. The attempt usually had been prolonged for several minutes and never more than a few drops of urine had been voided. This urgency had become progressively worse until at the time of examination there was a constant futile attempt to urinate. A constant dribbling from the urethra had been present. This had been most marked when the dog was asleep. No bleeding from the urethra had been observed. Constipation and difficult defecation had developed during the third month of the illness. The animal had appeared to be in pain during the acts of micturition and defecation. There had been a marked increase in thirst but the appetite for food had not been altered.

The animal was fat and markedly dyspneic. The rectal temperature was 101.6°F. The abdomen was uniformly distended. A large, regular, cystic tumor could be palpated in the midline of the lower part of the abdomen. This was freely movable and with pressure an increase in the urinary dribbling was produced. A firm, fixed, irregular tumor, approximately 2 by 2 cm., situated either in the neck of the bladder or in the uterine cervix, could be felt by rectal examination.

Surgical exploration through a midline incision revealed the obstructing tumor mass to be situated in the urethra at the neck of the bladder. The condition was thought to be inoperable, and the dog was immediately killed by inhalation of ether. At necropsy the urinary bladder was found to be distended and tense. Urine could not be forced from it by the application of pressure. There was an ulcerating, ragged, firm tumor, 2 by 2.5 cm., which involved the neck of the bladder and the first portion of the urethra (Fig. 1). This had caused nearly a complete obstruction of the urethra. No gross metastasis, either local or distant, was found. The kidneys were grossly affected. They contained multiple small

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cortical cysts and were mildly hydronephrotic. The other organs of the dog were grossly normal.

A section from the tumor showed that the normal mucosa had been entirely replaced by large diffusely arranged epithelial cells (Figs. 2 and 3). Many of these cells showed evidence of retrogression. The neoplastic process extended from the lumen of the urethra through to the inner muscular layer, although the muscle proper had not been invaded. There was a marked mononuclear and plasma-cell reaction which was particularly evident between the bulk of the tumor tissue and the inner muscular layer of the urethra. The neoplastic process was very irregularly disposed and was irregularly interrupted by strands of connective tissue which probably represented the remains of the normal structure. There was considerable evidence of necrosis of the superficial cells and a large number of the parenchymal cells of the tumor showed a hydropic condition of the cytoplasm with more or less displacement of the nucleus. There was also evidence of pyknotic contraction of the nuclei of the tumor cells. Mitosis was not common, but the neoplasm appeared to be highly malignant. The type of cell was of a large squamous variety, although intracellular bridges were not demonstrated. The tumor tissue was not particularly vascular and there was little evidence of superficial infection. The diagnosis was squamous-cell carcinoma of the urethra.

**COMMENT**

It was thought that the report of this case would be of value because of its comparative pathologic interest. It is similar in every detail to carcinoma of
Fig. 2. **Diffusely Arranged Epithelial Cells in Carcinoma of Urethra of a Female Dog.**  
× 100

Fig. 3. **Squamous-cell Carcinoma of Urethra of a Female Dog**  
Note the hydropic degeneration of the cytoplasm.  
× 575.
the urethra of women. The dog was of an advanced age. The symptoms presented were those of obstruction and were the same as those seen in man. Microscopically, it would be difficult to differentiate between a section of the tumor in this case and a section from a similar neoplasm in man.

**Summary**

A case of squamous-cell carcinoma of the urethra of a female dog is reported.

**Bibliography**