

## RETROVESICAL GASTROINTESTINAL STROMAL TUMOR

YOU SIK LEE, KYOKO SAKAMOTO,\* JERRY G. BLAIVAS,\*† AND ALICE CHU

From the Samsung Cheil Hospital, Sungkyunkwan University School of Medicine, Seoul, Korea, and Urocenter of New York and Cornell-Weill Medical Center, New York, New York

KEY WORDS: gastrointestinal neoplasms, ultrasonography

Primitive mesenchymal gastrointestinal tumors without evidence of differentiation are referred to as gastrointestinal stromal tumors. Because gastrointestinal stromal tumors are known for their wide variability in clinical behavior and for the difficulty in determining their malignant potential, numerous studies have been done to define better useful prognostic indicators.<sup>1-3</sup> We report a case of a gastrointestinal stromal tumor detected on routine bladder ultrasound for post-void residual urine following transurethral incision of the prostate.

### CASE REPORT

A 69-year-old man with diabetes presented in persistent urinary retention despite transurethral incision of the prostate 2 years previously. He underwent an uneventful transurethral resection of the prostate and began to void well. Post-void residuals were obtained using a bladder scan. Subsequently, he had a bladder neck contracture and underwent incision of the bladder neck.

Postoperatively, the patient had minimal voiding symptoms. Ultrasound of the bladder to evaluate post-void residual urine revealed what appeared to be a perivesical fluid collection behind the bladder base. He was asymptomatic, remained afebrile and voided well but what appeared to be fluid collection persisted after a month. Computerized tomography (CT) of the abdomen and pelvis showed a  $7 \times 7 \times 7$  cm. solid pelvis mass with heterogeneous density and focal calcification posterior to the bladder (fig. 1). The patient underwent exploratory laparotomy, and the mass was in the cul-de-sac behind the bladder attached to the mid portion of the ileum. Wide excision with small bowel resection was performed.

Grossly, the mass did not appear to involve the lumen or muscularis of the ileum. Frozen and paraffin sections of the lesion revealed gastrointestinal stromal tumor. On histolog-

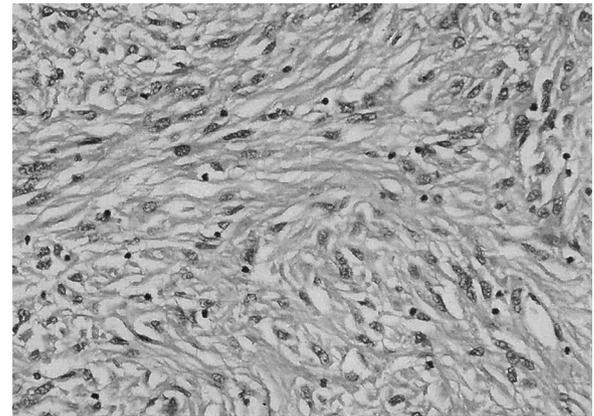


FIG. 2. Histologically, tumor was composed of spindly and epithelioid cells with moderate mitotic activity. Reduced from  $\times 40$ .

Accepted for publication August 11, 2000.

\* Financial and/or other relationship with the Institute for Bladder and Prostate Research and Pharmacia Upjohn Co.

† Financial and/or other relationship with Collagenesis, Calmia, Yamanonchi and Rhone Poulenc-Urocorp ARC.

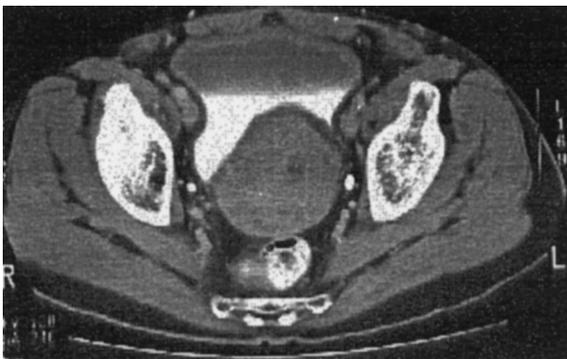


FIG. 1. CT of pelvis reveals  $7 \times 7 \times 7$  cm. solid mass behind bladder

ical analysis the tumor was composed of spindly and epithelioid cells with moderate mitotic activity (fig. 2). The tumor did not involve the overlying mucosa, vascular channels and lymph node, and the resection margins were tumor-free. Immunohistochemical studies supported the diagnosis of gastrointestinal stromal tumor with low malignant potential. Followup CT at 6 months and 1 year revealed no residual mass.

### DISCUSSION

In our patient post-void residual urine was fortuitously assessed with bladder ultrasound discovering a retrovesical pelvic mass, which was not apparent on a bladder scan preoperatively. Most gastrointestinal stromal tumors have been classified as smooth muscle tumors but recently it has been proposed that they arise from the intestinal cells of Cajal, namely the gastrointestinal pacemaker cells.<sup>2</sup>

The clinical behavior of gastrointestinal stromal tumors is difficult to predict. Clinicopathological analyses have indicated that malignant and metastatic potential correlate with the location, large size, high cellularity, presence of necrosis, solid pattern of growth and high mitotic count (5 mitoses or greater per 50 high power fields).<sup>2,3</sup> Ueyama et al reported that histological and immunohistochemical features were distinctly different, depending on the location in the gastrointestinal tract, such that all esophagus and colon tumors were benign.<sup>3</sup>

### REFERENCES

1. Tazawa, T., Tsukada, K., Makuuchi, H. et al: An immunohistochemical and clinicopathological study of gastrointestinal stromal tumors. *Pathol Int*, **49**: 786, 1999
2. Tworek, J. A., Appelman, H. D., Singleton, T. P. et al: Stromal tumors of the jejunum and ileum. *Mod Pathol*, **10**: 200, 1997
3. Ueyama, T., Guo, K. J., Hashimoto, H. et al: A clinicopathologic and immunohistochemical study of gastrointestinal stromal tumors. *Cancer*, **69**: 947, 1992