

rum levels of GOT and  $\gamma$ GT (Tables 1 and 2). TURP was performed again and 18 g of myxoid prostate tissue was curetted out. Then, the patient gradually felt shortness of breath 2 mo after the first episode of urethral obstruction. The chest plain film displayed right pleural effusion. Chest ultrasonography revealed massive hypoechoic heterogeneous right pleural effusion with passive atelectasis. Bloody pleural effusion was aspirated. The examination of the pleural effusion demonstrated an increase in white cell count (neutrophil: lymphocyte = 56:44), positive Rivalta test, sugar 87 mg/dL, protein 5.0 g/dL, and LDH 912U/L. Cytology examination of the effusion was negative for malignancy. Bacterial culture of the effusion was negative. Subsequent cystoscopy revealed kissing of the bilateral lobes of the prostate with intravesical growth of the prostate tumor. Pelvic CT scan revealed irregular growth of the prostate tumor into the bladder wall and pelvic lymphadenopathy. Lumbar MRI showed metastasis in the vertebrae. Bone scan displayed multiple bone metastasis in the tenth thoracic spine, inferior angle of the right scapula, right fifth costochondral junction, and left sixth rib.

Seven days later, sudden onset of respiratory failure with dyspnea and cyanosis was noted. Chest ultrasonography revealed lobulated hypoechoic pleural effusion in the right pleural cavity. A well-defined mass measuring 4 × 4 cm in dimensions was noted over the posterior upper lobe of the right lung. Mild extrinsic compression with no endobronchial lesion was noted in the right bronchial trees by bronchoscopy. Chest CT scan showed metastatic lesions in the lungs with pleural effusion. Some necrotic debris was drained out via thoracoscopy, and pathological examination showed sarcoma in the pleural tissue.

From then on, polyuria, hypercalcemia, anemia, and progressive decrease in the platelet count were noted. Patient's general condition rapidly deteriorated and became complicated with upper gastrointestinal bleeding. He died on 16 July 1997.

## DIFFERENTIAL DIAGNOSIS AND DISCUSSION

In adults, urinary tract obstruction is most likely due to an acquired problem. According to the patient's symptoms, the obstructed site along the urinary tract

should be located at the bladder outlet of the urethra. Differential diagnoses include benign prostatic hypertrophy, cancer of the prostate, cancer of the bladder, cystolithiasis, spinal cord disease, drug-related obstruction, urethral stricture, urethral tumor, and urethral stones. Physical examination and subsequent serial imaging study proved enlargement of the prostate in this patient. However, benign prostatic hypertrophy and ordinary prostate cancer are extremely rare for a 38-yr-old man. The low serum level of prostate-specific antigen did not support the possibility of prostate carcinoma. For this patient, an inflammatory process or unusual prostate tumor rather than benign prostatic hypertrophy and carcinoma should be considered. Nevertheless, acute prostatitis or prostatic abscess is usually accompanied by constitutional symptoms and tenderness of the prostate, which did not occur in this patient. Thus, chronic prostatitis or unusual prostate malignancy was a more reasonable clinical diagnosis. Pelvic CT scan performed during the first admission revealed marked enlargement of the prostate, but it is frequently difficult to make a definite diagnosis between benign and malignant prostate lesions, particularly without other abnormalities in the adjacent organs or regional lymphadenopathy. During the second admission, enlargement of the prostate with intravesical growth revealed by pelvic CT scan led physicians to suspect that the patient was suffering from prostatic malignancy. Unfortunately, pathological examination of both transurethral resected specimens showed no strong evidence to support the diagnosis of malignancy. Nevertheless, the patient's condition quickly worsened. Subsequently, the observed hypercalcemia, elevated serum level of alkaline phosphatase, anemia, and thrombocytopenia coupled with the result of bone scan examination, made the clinicians further speculate on the involvement of bone marrow with malignancy. Finally, tissue obtained from the right pleural cavity proved to be spindle cell sarcoma with no further differentiation.

Judging from the clinical pictures, imaging studies, and laboratory data, primary sarcoma of the prostate with direct invasion of the urinary bladder and metastasis to the right pleural cavity and spine was the most reasonable clinical diagnosis.

Although sarcoma of the prostate is rare, rhabdomyosarcoma is the most common primary malig-