A 37-year-old patient was referred to our hospital for probable pheochromocytoma of the urinary bladder. The patient had high blood pressure (BP) levels that increased after each micturition. The patient reported severe postmicturition headaches, palpitations, tinnitus, visual flashes, and symptoms of angina pectoris during the past 4 years. A right thalamic intracranial hemorrhage occurred 1 month before admittance. Basal urinary metanephrine excretion was extremely high (23.8 μmol/24 h; normal <3.7 μmol/24 h). As shown in Figure 1, micturition was associated with a major increase in BP and plasma norepinephrine concentrations. No adrenal or Zuckerkandl organ tumor was found on an abdominal computed tomography (CT) scan, but a right retrovesical mass was found on a pelvic CT scan (Figures 2 and 3). A single vesical mass appeared on 1-131 metaiodobenzylguanidine and octreotide nuclear scans. A partial cystectomy with tumor removal and right ureteral reimplantation was performed. Extensive vesical wall infiltration with cytonuclear abnormalities but normal lymph nodes was found on pathological examination. One month after surgery, urinary metanephrine levels were back to normal, seated blood pressure had decreased to 152/98 mm Hg, and the micturition-related adrenergic crises had disappeared.

Figure 1. Perimicturition beat-to-beat hemodynamic monitoring and associated plasma norepinephrine concentrations showing an acute blood pressure increase with a concomitant norepinephrine release during micturition. Intravenous nicardipine had to be administered to decrease blood pressure and relieve symptoms.

Figure 2. Pelvic, contrast-enhanced, axial CT scan showing a right retrovesical mass lesion.
Figure 3. Three-dimensional reconstruction of bladder (green) and pheochromocytoma (red) from CT acquisition data.
Pheochromocytoma of the Urinary Bladder
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