Primary hyperaldosteronism due to adrenal adenoma

Case presentation

A 37-year-old male was well in the past. He had suffered from chest tightness and hypertension for 7 years. He did not pay any attention to the above symptoms until 2 years earlier he began to take Esidri (reserpine 0.1 mg, apresoline 10 mg, esidrex 10 mg) thrice daily. However, blood pressure was controlled poorly and chest tightness attacked more frequent and severe recently. In the midnight of the day he was admitted, he was brought to our emergency service because of persistent severe chest tightness for 2 hours. On arrival, vital signs showed blood pressure was 180/110 mmHg, heart rate was 76/min, and respiratory rate was 20/min. Serum level of creatine kinase was 312 U/L with MB component of 10 U/L, and the follow-up values also showed 347 and 11 respectively. EKG showed normal sinus rhythm. CXR was normal. Hypokalemia (serum K 1.9 mmole/L) and metabolic alkalosis were noted and he was admitted to our ward under the impression of hyperaldosteronism. During hospitalization, hypertension persisted in spite of amlodipine, doxazosin, and captopril. Later it was under better control with spironolactone and chest tightness disappeared simultaneously. In the meantime urine chemistry revealed daily urine potassium loss was 58 mmole. TTKG was 8.5 (serum K 1.9 mmole/L, urine osmolality 517, serum osmolality 288 meq/L, and urine potassium 29 mmloe.L). The plasma rennin activity was unmeasurable and aldosterone was 685 (37.5 - 240) pg/ml. Abdominal CT disclosed a 2-cm low-density nodular lesion at right adrenal gland (Figure 1). Patient refused operation and was lost to follow-up later.
Figure 1. CT of abdomen showed a 2-cm low-density nodular lesion over right adrenal gland.