



Multiple ring-like calcifications of the kidney

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Multiple ring-like calcifications of the kidney

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Running title: ring-like calcification

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6 In June, 2010, a 76-year-old man was admitted to our Department of Urology for
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9 investigation of right renal mass. He was diagnosed to have liver cirrhosis, hepatitis C
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12 related for two years and was regularly followed up at our Outpatient Department of
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15 Gastroenterology. He had a 2-month history of right-sided upper abdominal pain and
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18 intermittent fever. Abdominal ultrasound performed by a gastroenterologist showed a
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21 large right renal mass with hydronephrosis. X-ray and abdomen computed
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24 tomography showed enlargement of right renal contour which was replaced by
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27 necrotic tumor and some calcified lymph nodes in the renal hilum region (Figure 1).
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30 Under the impression of renal cell carcinoma or transitional cell carcinoma, he
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33 underwent right radical nephrectomy, adrenalectomy and lymph nodes dissection.
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36 Grossly, the affected kidney demonstrated caseous necrosis and calcification in cortex
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39 and medullary regions with enlarged size (Figure 2). The pathological finding showed
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42 a picture of chronic granulomatous inflammation, composed of granuloma, caseous
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45 necrosis and Langhan's giant cells. In addition, acid fast bacilli were found under acid
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48 fast stain. Under the diagnosis of tuberculous pyelonephritis, he was treated with
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51 anti-tuberculosis agents.
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55 Urogenital tuberculosis is a worldwide disease which accounts for approximately 30%
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58 to 40% of extrapulmonary tuberculosis. Because of its insidious evolution and
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late-onset symptoms, diagnosis and treatment are delayed; with a consequent high rate

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4 of urogenital organ destruction and renal failure.¹ The most common presentations of
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7 urogenital tuberculosis include renal parenchymal mass, autonephrectomy,
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10 hydronephrosis, ureteral stricture and dilatation, and bladder involvement and fibrosis.
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13 Notably, renal calcified tuberculoma is not an unusual feature of urogenital
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16 tuberculosis and is often misdiagnosed as renal stones. In this study, the kidney
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19 showed “ring-like” calcification in the hilum region, and it is quite rare in urogenital
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22 tuberculosis. The differential diagnosis of this image should include renal cell
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25 carcinoma, transitional cell carcinoma, and xanthogranulomatous pyelonephritis.
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28 However, these diseases usually present as single “ring-like” calcification in the
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31 kidney, whereas it presents as multiple “ring-like” calcification in this case.
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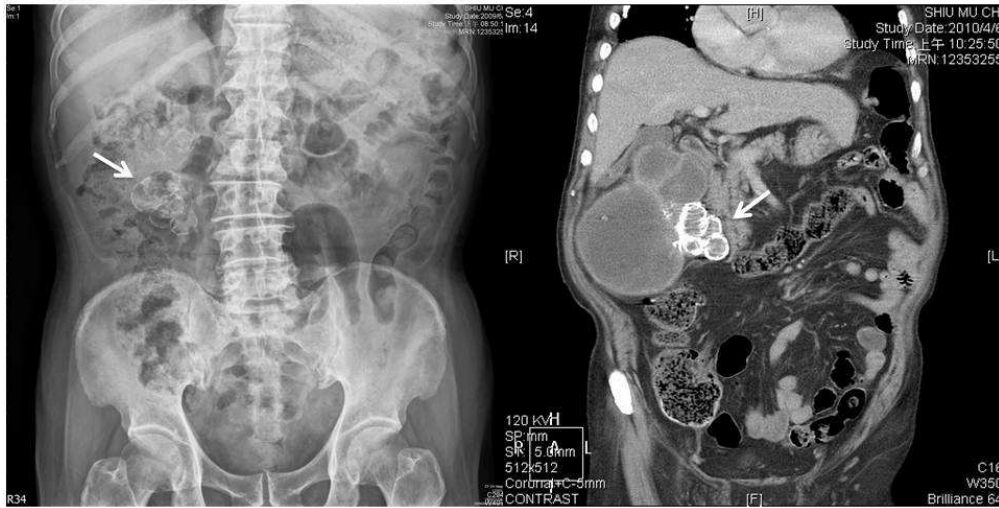
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46 tuberculosis worldwide. *Int J Urol* 2008;**15**:827-832
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50
51 Figure 1. Abdomen computed tomography showing enlargement of right necrotic
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53 tumor with some calcified lymph nodes in the renal hilum region (arrow).
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57 Figure 2. Radical nephrectomy showing caseous necrosis and calcification in cortex
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59 and medullary regions.
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