

# Acute Renal Colic: Value of Unenhanced Spiral Computed Tomography Compared with Intravenous Urography

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## Abstract

**Objective:** The objective of this study was to compare the efficacy of plain spiral computed tomographic (CT) scan with intravenous urography (IVU) in the evaluation of patients with suspected urinary calculi/obstruction. **Materials and Methods:** Twenty consecutive patients with acute signs of renal colic were prospectively examined with unenhanced spiral CT followed by an IVU within the same day. The CT scans were reviewed jointly by 2 radiologists blinded to the IVU and a consensus was reached for each finding. The IVU was similarly reviewed by another 2 separate radiologists. **Results:** Eleven of the 20 patients had signs of urinary obstruction on CT and IVU. Of these 11 patients, 7 had a ureteric calculus that was demonstrated on CT and IVU and 4 had a calculus that was demonstrated on CT only. Two patients had a urinary calculus seen on CT and IVU with no signs of urinary obstruction. One patient had a calculus seen on CT alone with no urinary obstruction. Two patients only had signs of urinary obstruction on CT. The remaining 4 cases had normal findings on CT and IVU. **Conclusion:** Unenhanced CT is more effective than IVU in identifying ureteric calculi and is equally effective in detecting urinary obstruction. CT is also useful in detecting secondary signs of obstruction even in the absence of any calculus.

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**Key words:** Calculus, Fat stranding, Obstruction, Periureteric, Ureteric

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