



## Utility of enhanced CT for patients with suspected uncomplicated renal colic and no acute findings on non-enhanced CT

Submitted by Stéphanie Pinot on Wed, 10/16/2019 - 11:24

Titre Utility of enhanced CT for patients with suspected uncomplicated renal colic and no acute findings on non-enhanced CT

Type de publication Article de revue

Auteur Robert, C [1], Gandon, Yves [2], Peyronnet, Benoit [3], Gauthier, S [4], Aubé, Christophe [5], Paisant, Anita [6]

Editeur Elsevier

Type Article scientifique dans une revue à comité de lecture

Année 2019

Langue Anglais

Date Octobre 2019

Numéro 10

Pagination 813.e11-813.e18

Volume 74

Titre de la revue Clinical Radiology

ISSN 1365-229X

Résumé en anglais

AIM: To evaluate the utility of contrast-enhanced computed tomography (CECT) for patients with suspected uncomplicated renal colic (URC) and no abnormalities on non-enhanced computed tomography (NECT).

MATERIALS AND METHODS: The hospital institutional review board and ethics committee approved this retrospective study with a waiver of informed consent. Between January 2016 and April 2017, all consecutive adult patients who consulted at the adult Emergency Department (ED) with suspected URC and who had undergone both NECT and CECT were included retrospectively. The primary endpoint was prevalence of CECT-only diagnosis without acute findings on NECT. The risk factors for an acute finding were identified by logistic regression analysis.

RESULTS: Among 126 patients with suspected URC, 12 were excluded. Among the 76 patients with no acute findings on NECT, CECT led to find acute lesions in 14/76 (18%) cases, but only 2/76 (3%) resulted in a change of management. Predictive factors of abnormal finding on CECT were: low renal clearance and high leukocyte count with OR 0.96 (95% confidence interval [CI]: 0.93-0.99),  $p=0.0189$  and OR 5.79 (95% CI: 1.55-21.64),  $p=0.0091$ , respectively.

CONCLUSIONS: In most cases, NECT is sufficient for screening patients with suspected URC. If leucocytosis and low renal function are present, stronger consideration may be given to CECT.

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DOI 10.1016/j.crad.2019.06.007 [8]

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Titre abrégé Clin Radiol  
Identifiant (ID) PubMed 31300208 [10]

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