

A Comparative, Epidemiological Study of Acute Renal Colic Presentations to Major Academic Emergency Departments in Doha, Qatar and Melbourne, Australia

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Abstract : Background: This study aimed to compare epidemiology, clinical presentations, management and outcomes of renal colic presentations in two major academic centers and discuss potential implications of these results for the applicability of current evidence in the management of renal colic. Methods: We undertook a retrospective cohort study of patients with renal colic who presented to the Hamad General Hospital Emergency Department (HGH-ED), Qatar, and The Alfred ED, Melbourne, Australia, during a period of one year from August 1, 2012, to July 3, 2013. Cases were identified using ICD-9-CM codes, and an electronic template was used to record the data on predefined clinical variables. Results: A total of 12,223 from the HGH-ED and 384 from The Alfred ED were identified as renal colic presentations during the study period. The rate of renal colic presentations at the HGH-ED was 27.9 per 1000 ED visits compared to 6.7 per 1000 ED visits at The Alfred ED. Patients presenting to the HGH-ED were significantly younger [34.9 years (29.0- 43.4) than The Alfred ED [48 years (37-60); $P < 0.001$]. The median stone size was larger in the HGH-ED group [6 (4-8) mm] versus The Alfred ED group [4 (3-6) mm, $P < 0.001$]. The intervention rate in the stone-positive population was significantly higher in the HGH-ED group as opposed to The Alfred ED group (38.7% versus 11.9%, $p < 0.001$). At the time of discharge, The Alfred ED group received less analgesic prescriptions (55.8% versus 83.5%, $P < 0.001$) and more tamsulosin prescriptions (25.3% versus 11.7%, $P < 0.001$). Conclusions: Renal colic presentations to the HGH-ED, Qatar, were younger, with larger stone size, compared to The Alfred ED, whereas, medical expulsion therapy use was higher at the Alfred ED. Differences in epidemiology should be considered while tailoring strategies for effective management of patients with renal colic in the given setting.

Keywords : kidney stones, urolithiasis, nephrolithiasis, renal colic, epidemiology

Conference Title : ICEM 2017 : International Conference on Emergency Medicine

Conference Location : Dubai, United Arab Emirates

Conference Dates : November 24-25, 2017