

Role for emergency primary ureteroscopy for refractory renal colic? A retrospective consecutive analysis

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Introduction

Admissions for ureteric colic are a common emergency presentation. We present a retrospective analysis of consecutive patients who underwent emergency primary ureteroscopy versus emergency primary ureteric stenting.

Methods

We retrospectively analysed 40 patients who underwent either primary ureteric stenting or ureteroscopic stone removal in our institution. 20 patients of each group were recruited consecutively in our institution. Patients with urosepsis, renal impairment or solitary kidneys were excluded. Primary outcomes investigated were stone characteristics, number of hospital readmissions and time to stone-free status.

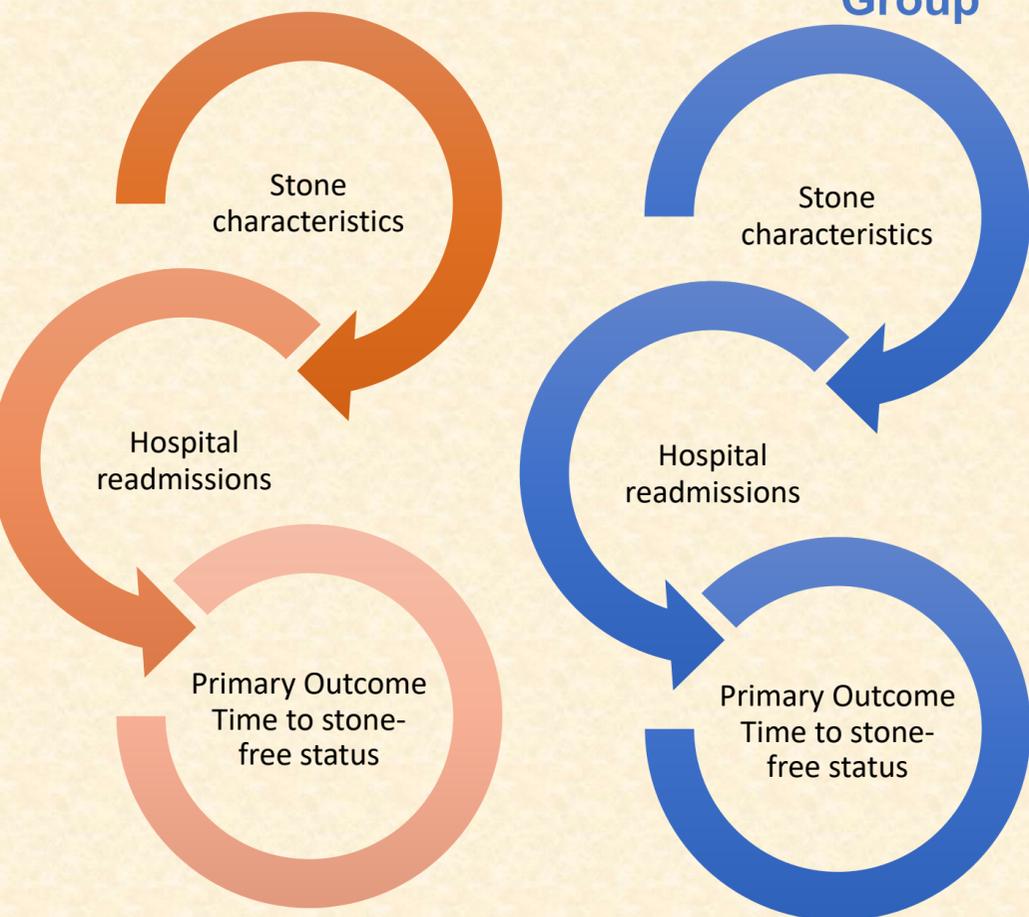
Retrospective consecutive analysis

Renal colic presentation to Emergency Department between January 2020-December 2020

Intervention for ongoing renal colic

Primary URS Group

Ureteric stenting Group



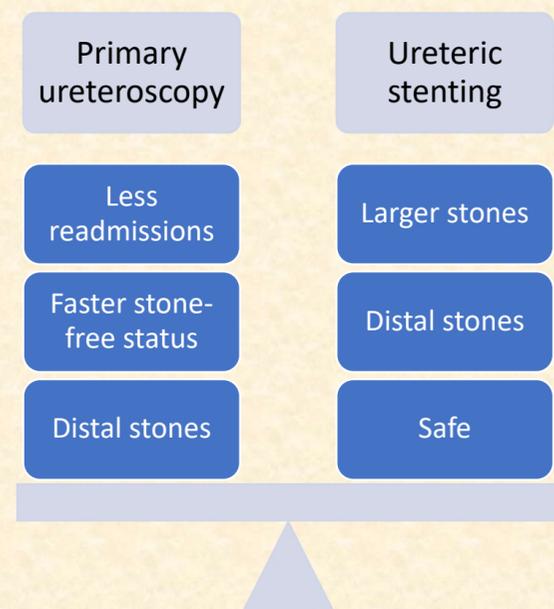
Results

Both groups of stenting and primary ureteroscopy were comparable with respect to age and sex.

Primary ureteroscopic group possessed significantly more distal stones compared to the primary stenting group (17 vs. 6 p<0.03). The primary ureteroscopic group had smaller overall size of stone <6mm compared to the primary stenting group (14 vs. 8 p<0.05). Primary ureteroscopy stone free rate was 90%. Emergency department representation rate within 2 weeks was statistically higher in the primary stenting group (8 vs 2 p<0.04). Patients became stone free significantly faster in the ureteroscopy group compared to the primary stenting group (2.3 days vs. 45.7 days p<0.01).

| Characteristics of Cohort | | | |
|-----------------------------------|-----------------------------|-----------------------------|--------|
| Characteristics | Primary ureteroscopy group | Ureteric stenting group | |
| Mean Age | 46.2 | 40.8 | |
| Gender | (M) 11 (F) 9 | (M) 10 (F) 10 | |
| Size of stone <6mm | 14 | 8 | p=0.05 |
| Location of stone [^] | Distal – 17 Proximal – 3 | Distal – 6 Proximal – 14 | p<0.03 |
| Number of hospital readmissions# | 2 | 8 | p<0.04 |
| Average time to stone-free status | 2.3 days | 45.7 days | p<0.01 |

[^] - Distal was defined as beyond the iliac vessels, Proximal was defined as at the level of the iliac vessels and above
- all readmissions were due to pain/infection



Conclusions

In select instances, upfront primary ureteroscopy can be considered for uncomplicated renal colic. Distal stones smaller stones in the absence of infective features are favourable for primary ureteroscopy. The improved days to becoming stone free is an optimal outcome for the patient which can translate into more frugal healthcare savings costs.