Introduction

- Ureteric stents are frequently inserted post ureteroscopy. Subsequent removal necessitates a further endoscopic procedure, most commonly by flexible cystoscopy.
- A new stent which is removed with a magnetic retrieval device (BlackStar®), obviates the need for formal cystoscopy.(1)
- We report our early experience with this novel method, in which all stents were removed in a nurse-led stent removal clinic.

Aim

- To examine outcomes of patients who had magnetic stents inserted post ureteroscopy, to assess the patient experience and associated cost savings.

Methods

- A retrospective analysis was performed of all patients who underwent magnetic stent insertion and subsequent nurse-led removal at our institution over a nine-month period.
- Data collected included patient demographics, procedure information, length of stay and incidence of complications.
- All patients were asked to complete a validated stent symptom questionnaire (USSQ) as well as satisfaction rating.(2)
- Costings were obtained from the finance department.

Results

- A total of 59 patients had magnetic stents inserted during the study period. All stents were inserted post ureteroscopy for ureteric or renal calculi.
  - Flexible ureteroscopy - 65.3%, rigid - 8.2%, both - 4.1%
  - Ureteric access sheaths – 12.3%
  - Ureteric balloon dilatation – 8.4%
- Response rate to the USSQ questionnaire was 74.6%.
- Only 30% of patients described their urinary symptoms as causing them significant bother.
- Only 25% of patients reported debilitating stent pain (significantly impacting on their activities of daily living).
- Overall, <10% patients experienced significant functional impairment due to the stent.
- Stent symptoms resulted in few working days lost (mean 0.75).

Figure 1 – Functional impairment due to stent symptoms

Figure 2 – Working days lost due to stent symptoms

- 90.7% of patients reported that they were ‘satisfied/very satisfied’ with their experience in nurse-led clinic.
- 97% were happy to have stents removed via this method in the future.

- The complication rate was 6.7%, including one urosepsis, one UTI, one acute urinary retention and one dislodged stent passed per urethra in a female patient. There were no failed stent retrievals by the nurse.

- The mean cost savings per procedure were €200 - €610, producing total savings of €47,790 over a nine month period.

Conclusion

Nurse-led removal of magnetic stents is safe and well tolerated by patients and represents a significant potential cost benefit.

References