Getting on board with GIRFT. Evaluation of a novel emergency rigid ureteroscopy service for the management of ureteric stones

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Objective

The GIRFT acute stone pathway recommends definitive stone treatment for patients requiring intervention within 48 hours. In the UK, patients are mainly stented to await ureteroscopy or managed conservatively. Failure to provide early definitive treatment results in lengthy waits for ureteroscopy with significant stent-related morbidity or long waits for stone passage with repeat presentations with pain and more time off work. We evaluate our novel emergency primary ureteroscopy service to improve patient care and align with GIRFT recommendations.

Patients and Methods

We conducted a retrospective review of this Quality Improvement Project. Patients with confirmed ureteric stones presenting to A/E between May 2022 - May 2024 were categorized based on the initial management approach to either conservative, stent insertion, or primary ureteroscopy. Data on demographics, treatment outcomes, complications, waiting times, and procedures performed were analysed.

Results

618 patients were studied.

343 patients were managed conservatively. 236 were stone-free at follow-up. There were 22 readmissions (13 managed conservatively and 9 stented). 82 patients are still awaiting follow-up.

147 patients were stented. 108 had upper ureteric stones. Mean wait for ureteroscopy: 3 months (12 days - 10 months). 29 patients still await ureteroscopy.

128 patients underwent primary ureteroscopy (mean size 7mm, 111 lower, 10 mid, and 7 upper ureter). 124 patients were stone-free. There was one readmission with sepsis and 2 readmissions with residual fragments, with 2 failed procedures.

Discussion

Primary emergency ureteroscopy provides definitive early treatment, is safe and effective with low complication and readmission rates. Over this 2-year period, we reduced patients awaiting elective ureteroscopy via the emergency pathway by 46.5%. The introduction of our emergency ESWL service will further reduce this. We will report this in due course. Implementing primary ureteroscopy as standard practice in acute settings will align hospitals with GIRFT recommendations, improve patient experience, and reduce complaints.

Strings attached - Empowering patients to remove their own stents at home.

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Introduction

Ureteric stents are commonly placed following ureteroscopy and typically require removal via a subsequent flexible cystoscopy. Leaving the extraction strings attached to the stents allows for self-removal by patients at home, potentially reducing stent dwell time, minimizing hospital resource use, and lowering healthcare costs.

Method

In January 2025, we initiated the use of stents with extraction strings in selected patients, supported by a comprehensive patient information leaflet detailing the self-removal process and contact information for assistance. Over a three-month period, we prospectively reviewed all cases to assess outcomes, with particular attention to complications.

Results

A total of 45 stents with extraction strings were placed during the initial three month period. Four patients required hospital support for removal; no cases of accidental stent dislodgement were recorded. One patient experienced a Clavien-Dindo grade IV complication due to steinstrasse following stent removal. Notably, none of the patients required flexible cystoscopy for stent retrieval. This intervention freed 45 flexible cystoscopy appointments and resulted in cost savings exceeding £14,000.

Conclusion

The implementation of ureteric stents with extraction strings in selected patients appears to be a safe and effective strategy. It significantly reduces the demand for hospital-based stent removal procedures and provides considerable time and cost benefits.

Magnetic Black-Star® for Short-term Ureteric Stenting After Stone Surgery. The Future of Stent Removal? A Pilot Study

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Introduction

Ureteric stenting is common after ureteroscopy but cystoscopic removal of them can be unpleasant for patients and costly. Ureteric stents with extraction strings risk premature dislodgement and increased urinary symptoms due to string irritation. We aimed to evaluate the feasibility of a novel ureteric stent that incorporates a small magnet at its distal-end (Magnetic Black-Star®, Urotech).

Methodology

In this pilot study, the magnetic stent was inserted following ureteroscopy for stone removal in 10 consecutive patients, who had previously undergone ureteroscopy with standard DJ sent insertion. We compared the patient experience, using the Ureteral Stent Symptom Questionnaire (USSQ), as well as the cost and time for removal.

Results

All 20 stents were removed within 2 weeks of insertion. The USSQ did not show statistically significant differences between magnetic and non-magnetic stents in any domain. In contrast, patients with magnetic stents experienced significantly less pain during removal compared with cystoscopy (mean VAS score 2.2 vs. 4.9; $p<0.001$). All magnetic removals were performed within less than 30 seconds. 90% of the patients preferred to have their stents removed by this method in the future. On average the estimated cost of removing a Black-Star stent is £90 cheaper than single use cystoscopy and £120 cheaper than reusable cystoscopy, however stent on strings is still the cheapest option.

Conclusion

Magnetic stents have a similar morbidity to standard ureteric stents. However, magnetic stent removal is preferable to patients, causing less pain and can be rapidly performed in an outpatient setting avoiding the need for cystoscopy.

The positive impact of primary emergency ureteroscopy in resolving acute ureteric stones with non-infected obstructed kidneys

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Introduction

GIRFT guidance on acute urinary tract stone management recommends the availability of definitive stone management including ureteroscopy in the acute stone pathway. We present the outcomes of emergency ureteroscopy (eURS) carried out in our Emergency Theatre for non-infected obstructed kidneys (n-IOKs) secondary to acute ureteric stones.

Methods

eURS was implemented in September 2024 after Emergency Theatre staff trained in laser safety and ureteroscopy. Retrospective data were collected on the 50 patients before implementation with n-IOKs managed via temporising ureteric stent, and prospective data on the first 50 such patients managed via eURS. The primary outcome was the time in days to resolution of the acute stone episode (defined as the patient having no ureteric stone and stent). Secondary outcomes were the time taken to operate from being added to the emergency list, the number of temporising stents inserted for n-IOKs (post-implementation), and hospital reattendances with stent-related symptoms.

Results

The average time to resolution of the stone episode for the 50 patients with n-IOKs prior to implementation of eURS was 156 days; this figure for the first 50 patients who underwent eURS was 21 days. The average time to eURS was 1.7 days. Since implementation of eURS only six patients with n-IOKs received temporising ureteric stents; three of those had attempted eURS which did not succeed. 10% of eURS patients reattended hospital for stent-related symptoms compared to 36% who had temporising stents prior to eURS implementation.

Discussion

eURS in an Emergency Theatre provides a 7 fold quicker time to resolution of the acute stone episode for n-IOKs, with reduced hospital attendances for stent-related symptoms. It is definitely achievable through collaboration and teamwork. Further development is required in ensuring timely access to surgery from listing.

"Evaluating an Ambulatory Pathway for Renal Colic: Reducing Patient Wait Time and Inpatient Imaging Burden"

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Background

Renal or ureteric colic affects 1–2 per 1,000 people annually. In 2023, a large UK teaching hospital recorded 80–100 monthly presentations. Many patients presented without adverse features—normal renal function, afebrile, pain control with oral analgesia —faced prolonged Emergency Department waits, delayed urology review, and slow CT imaging access. An ambulatory renal colic pathway (ARCP) was introduced in late 2024 to reduce pressure on emergency and inpatient radiology services by diverting low-risk patients from admission while ensuring timely imaging and specialist review.

Methods

A retrospective cohort study analysed 107 patients—50 pre-ARCP (June 2023) and 57 post-ARCP (January 2025). Data included CT KUB timing (inpatient vs outpatient), reporting turnaround, attendance rate, stone detection rate and time to urology follow-up.

Results

Pre-pathway, 48% of CTs were inpatient and 52% as outpatient of that 2% occurred within 24 hours, 28% within 24–48 hours, and 22% within 3–10 days. Post-pathway, 72.3% were within 3–10 days, 23.4% between 11–20 days. Outpatient scan non-attendance went from 0 to 14%. Same-day reporting fell from 100% pre- to 29.8% post-pathway. Stone detection were 42% to 21% pre and post pathway. Approximately 70% received urology review within 24 hours of scan.

Conclusion

While the ARCP reduced patient wait time at acute presentation and inpatient scan demand, overall timing to receiving scan has increased. This ambulatory pathway has resolved the issue of acute wait time and inpatient scan demand per trusts request. However, the outpatient ambulatory radiology provision has not been able to meet demand despite prior planning, and this has resulted in a new, clinically relevant delay in patient care. Successful deployment of ambulatory pathways requires careful thought and consideration of system pressures to ensure a balanced approach to maintain timely care provision, uphold patient safety, and achieve both service efficiency and patient satisfaction.

Calibrating ureteric stricture length using Vessel Sizing Catheter - Point of technique

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Endourological management of ureteric stricture disease is well established, with Segmental Intra-ureteric Stents (SIS) playing an emerging role in long-term care. Accurate measurement of stricture length is essential for selecting the appropriate SIS - particularly the Memokath 051 (MK) - and for surgical planning where reconstruction is feasible.

Traditional methods often rely on extracorporeal measurement, typically involving withdrawing a ureteric catheter between the ends of the stricture to measure length, either intraoperatively, or on fluoroscopy. Such techniques are associated with measurement inaccuracies due to magnification errors and anatomical movement. We present a novel technique for intracorporeal intraluminal stricture measurement using an angiographic catheter, enabling more precise assessment.

Technique

A retrograde pyelogram is performed to identify the proximal end of the stricture. However, assessing the distal end and ureteral integrity via retrograde pyelography alone is unreliable. Thus, we use ureteroscopic visualisation to localise the distal end of the stricture. The distance between the proximal and distal points is then measured internally using a 5Fr Performa Vessel-Sizing Catheter (VSC; Merit Medical, South Jordan, UT), which features radio-opaque markers at 1cm intervals (Figure 1).

Figure 2 illustrates the fluoroscopic images of the VSC in situ. The radio-opaque markings enable accurate length determination directly on the fluoroscopic monitor, aiding in the precise selection and deployment of MK stent (Figure 3), or for planning reconstruction.

Conclusion

This technique allows direct and reliable intracorporeal intraluminal measurement of ureteric strictures. Unlike extracorporeal measurements, it remains unaffected by fluoroscopic magnification or renal movement due to respiration. We anticipate that improved stricture assessment will support optimal SIS placement and reduce complications. We will be prospectively auditing the impact of this new technique through a pilot study.

The stent register reimagined, automated and fully integrated into the EPR (electronic patient records)

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Objectives

When a double J stent (DJS) is forgotten, it can cause morbidity, often requiring more complex surgery, and mortality is reported. We are not aware of a reliable, easy-to-use, and auditable DJS register.

Methods

Using in house IT resources to transform our procedure requesting software, a urology specific electronic surgery request form was created. Stents that have been inserted are now logged in when the surgeon requests the definitive procedure. It automatically logs stents according to their clinical codes. Weekly email alerts are sent for stents nearing expiry. A retrospective audit from May 2022 to December 2024 was performed to ascertain the accuracy of the register.

Results

1801 stent journeys were captured; there were no lost stents on cross-checking theatre and radiology logs. It is cost neutral, easy to use, and fully auditable. All antegrade stents inserted by the interventional radiology department were captured.

The register classified 267 stents as forgotten; they were in situ for more than 6 months. These patients were known to the service and were not lost. 8 major coding errors by non-clinical staff were found on audit; these patients were erroneously marked as having had stents removed when they still had a stent in situ. This was corrected with education.

Discussion and Conclusion

This new innovative, fully hospital network-integrated electronic stent register has transformed the logging of DJS and eliminated “lost” stents in our hospital trust. We believe this to be reproducible, and we would like to share it with the urological community.