

IDENTIFY: The Investigation and DEtection of urological Neoplasia in paTients referred with suspected urinarY tract cancer: A multicentre analysis

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Introduction: The IDENTIFY study aims to determine contemporary urinary tract cancer prevalence and diagnostic test performance in patients referred to secondary care with suspected urothelial cancer.

Methods: IDENTIFY is the largest ever prospective, international, multi-centre study of patients referred to secondary care, with or without haematuria, for the investigation of suspected urinary tract cancer. Patient demographics, presenting features and diagnostic test results were recorded. Prevalence rates were calculated for each subtype of urological cancer and diagnostic test accuracies were calculated.

Results: Over 11,000 patient records were collected from 111 hospitals in 27 countries (Dec 2017 – Dec 2018). 65.5% had visible haematuria [VH], 28.9% non-visible haematuria [NVH] and 5.6% no haematuria [NH]. The prevalence of bladder cancer [BC] was 17.9%; (VH: 22.4%, NVH: 5.2%). The prevalence of Upper tract urothelial cancer [UTUC] was 1.17% (VH: 1.60% NVH: 0.28%), renal cell carcinoma [RCC] 0.98% (VH: 1.26% NVH: 0.41%) and prostate cancer 1.14%. Prevalence varied significantly with age and geography. Countries with a lower healthcare access and quality index had a higher cancer detection rate. Variables significantly associated with BC included type of haematuria, age, smoking history, anticoagulation, storage urinary tract symptoms and having had >1 episode of VH.

Conclusions: IDENTIFY provides contemporary cancer detection rates and patient variables in a global population alongside diagnostic test performance for each cancer type. The detailed data will allow a personalised approach to haematuria investigations and improve shared decision-making by developing predictive models to optimise cancer detection. These patient-specific pathways will reduce patient and healthcare resource burdens.

Long-term outcomes of urethral catheterisation injuries: A prospective multi-institutional study

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Introduction: There are no prospective data describing the incidence and spectrum of long-term complications associated with traumatic

urethral catheterisation (UC). We prospectively monitored the long-term clinical outcomes and complications of patients with iatrogenic urinary catheter related urethral injuries.

Methods: A prospective study at 2 tertiary university hospitals was performed to record all referrals for iatrogenic urethral injuries caused by UC. Long-term follow-up was prospectively maintained by regular outpatient department visits and by monitoring all urological interventions and their outcomes from urinary catheter related injuries.

Results: The incidence of traumatic UC was 13.4 per 1,000 catheters inserted in male patients and 37 iatrogenic urethral injuries were recorded. The mean age was 74 ± 12 years and the mean length of follow-up was 37 ± 3.7 months. Urethral injuries were caused by inflating the catheter anchoring balloon in the urethra ($n = 26$) or by creating a false passage with the catheter tip ($n = 11$). In total, 29 patients (78%) developed urethral stricture disease during their follow-up; of which 11 have required at least 1 urethral dilation and 2 have required 1 urethrotomy. Three patients required long-term indwelling suprapubic catheter placement and 7 patients opted for a long-term indwelling urethral catheter. There were 8 patient mortalities; 1 of which was due to severe urosepsis resulting from catheter balloon inflation in the urethra.

Conclusion: Catheter related injuries are associated with significant long-term complications in this vulnerable patient cohort. In future, such injuries may be preventable if the safety profile of the urinary catheter is modified.

Predictors of Emergency Department Attendance Following Ureterorenoscopy for Urolithiasis

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Background: We sought to determine the rate of emergency department (ED) attendance for complications after ureterorenoscopy (URS) for stone disease and to identify risk factors for ED attendance after URS.

Methods: An analysis of all patients undergoing URS over 12-months at a single institution was performed. Patient demographics, pre-operative and intraoperative variables associated with postoperative complications and subsequent ED attendance was collected. Logistic regression analyses were performed to determine predictors of URS complications presenting to ED.

Results: 202 ureteroscopies were performed on 142 patients for urolithiasis. The mean age was 50.73 ± 13.93 and 66% were male. The incidence of re-presentation to ED was 14.8% ($n = 30$). Patients presented with postoperative pain: ($n = 10$; 4.95%), pyrexia: ($n = 9$; 4.46%), urinary tract infection (UTI) ($n = 7$, 3.47%), haematuria ($n = 3$, 1.49%) and urosepsis: ($n = 1$; 0.5%). Significant risk factors for ED attendance included stone size ≥ 13 mm ($P = 0.048$; 95% confidence interval [CI]: 1.0063 to 5.5660), positive preoperative urine culture treated within 30 days ($P < 0.0001$; 95% CI: 2.7363 to 15.6428), preoperative ureteric stent dwelling time ($P = 0.043$; 95% CI: 1.7267 to 109.8533), mid-ureteric stone location ($P = 0.046$; 95% CI: 1.0226 to 10.2653) and female gender ($P = 0.006$; 95% CI: 1.3668 to 6.6631).

Conclusion: Risk factors for ED attendance after URS include stone size ≥ 13 mm, treatment for a positive preoperative urine culture, prolonged preoperative stent dwelling time, mid-ureteric stone location and female gender. Urologists should be aware of these findings to decrease the risk of emergency re-presentation after elective URS surgery.