

An Assessment of the Safety of Performing Elective Percutaneous Nephrostomies as Day-case Procedures

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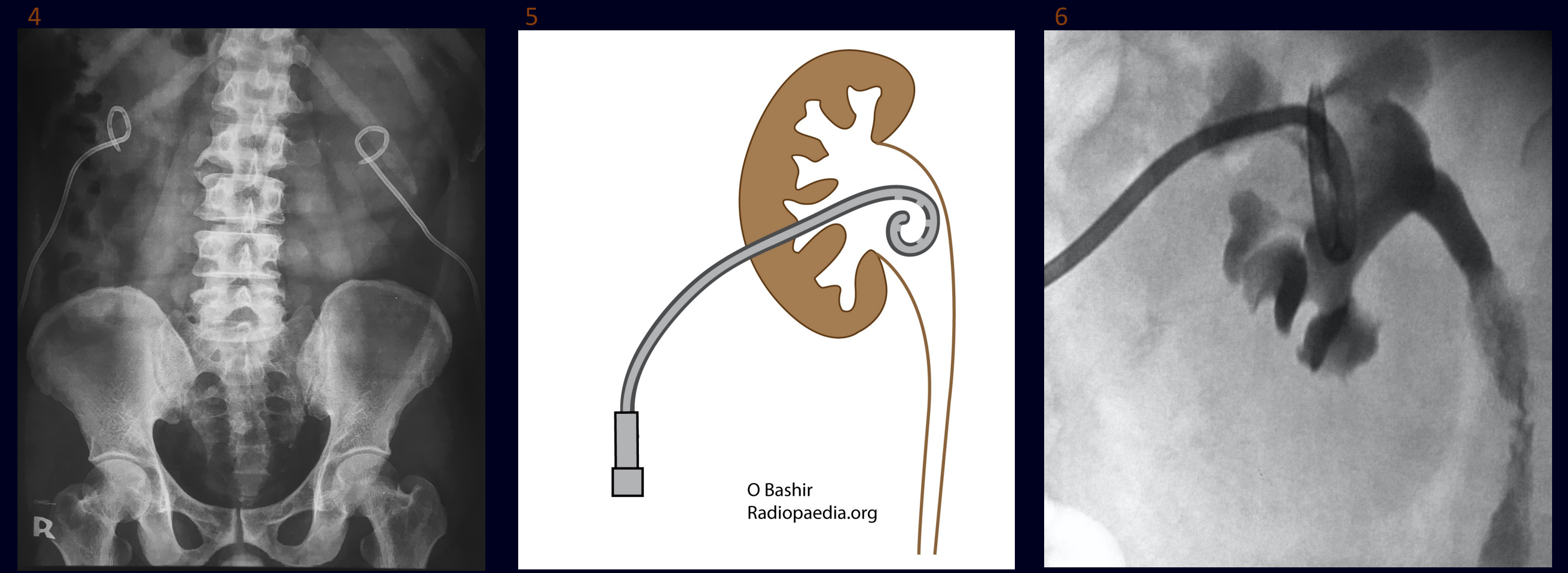
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Purpose

Elective Nephrostomies are commonly performed to create urinary diversion to decompress the renal system.¹

There is currently minimal evidence on complication rates and no national guidelines regarding admission length post elective nephrostomies²

Aim of the study: Establish complication rates following elective nephrostomies and determine whether it is safe to carry out as a day-procedure



Materials and Methods

Data Collection:

- Data was retrieved from SOLITON following criteria
- Data included age, date of procedure, indication and procedural details
- After excluding data as per the criteria, patient complication, management, length and indication of admission were noted

Inclusion Criteria:

- Patients >18yrs
- Elective nephrostomies at the NNUH (January 2013 to September 2023)
- New primary puncture into the renal system

Exclusion Criteria:

- Emergency nephrostomies
- Existing nephrostomies used as access

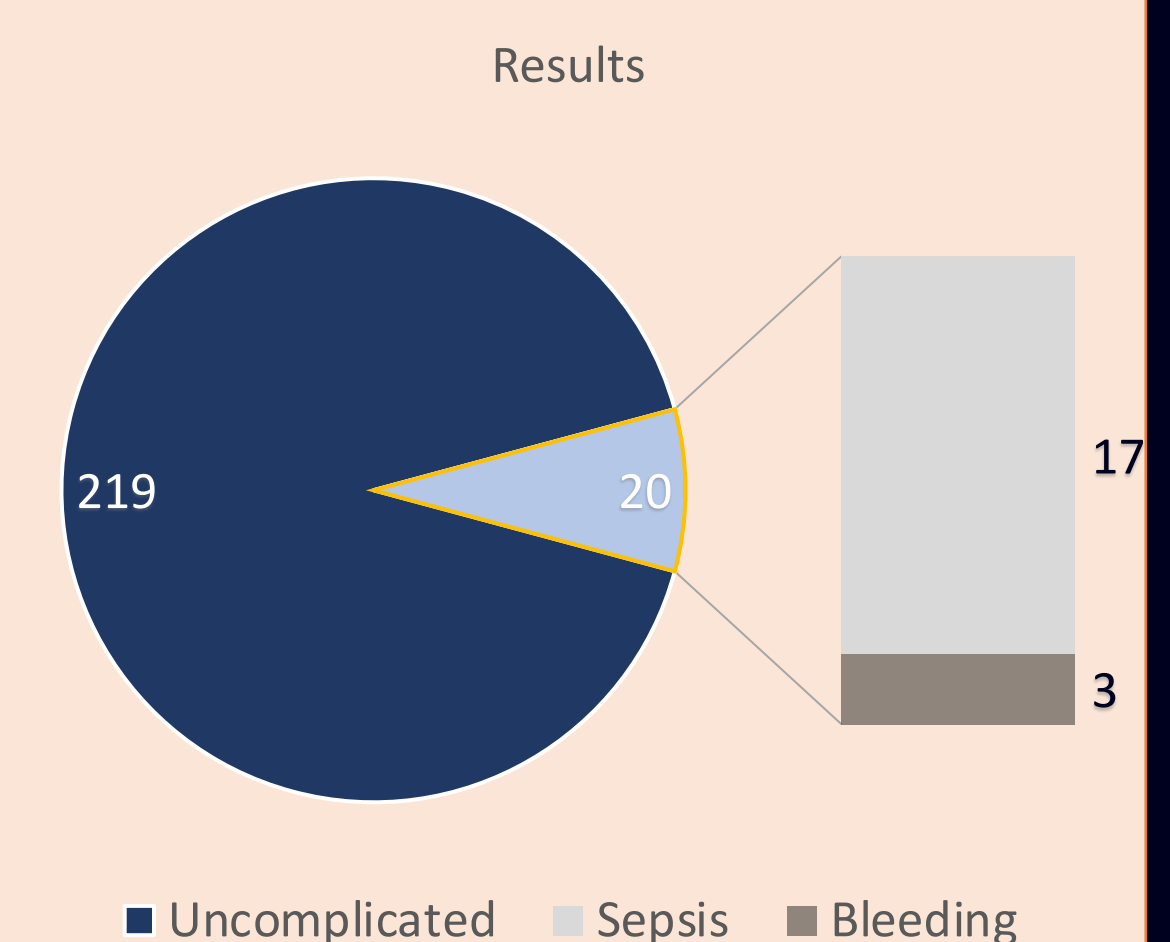
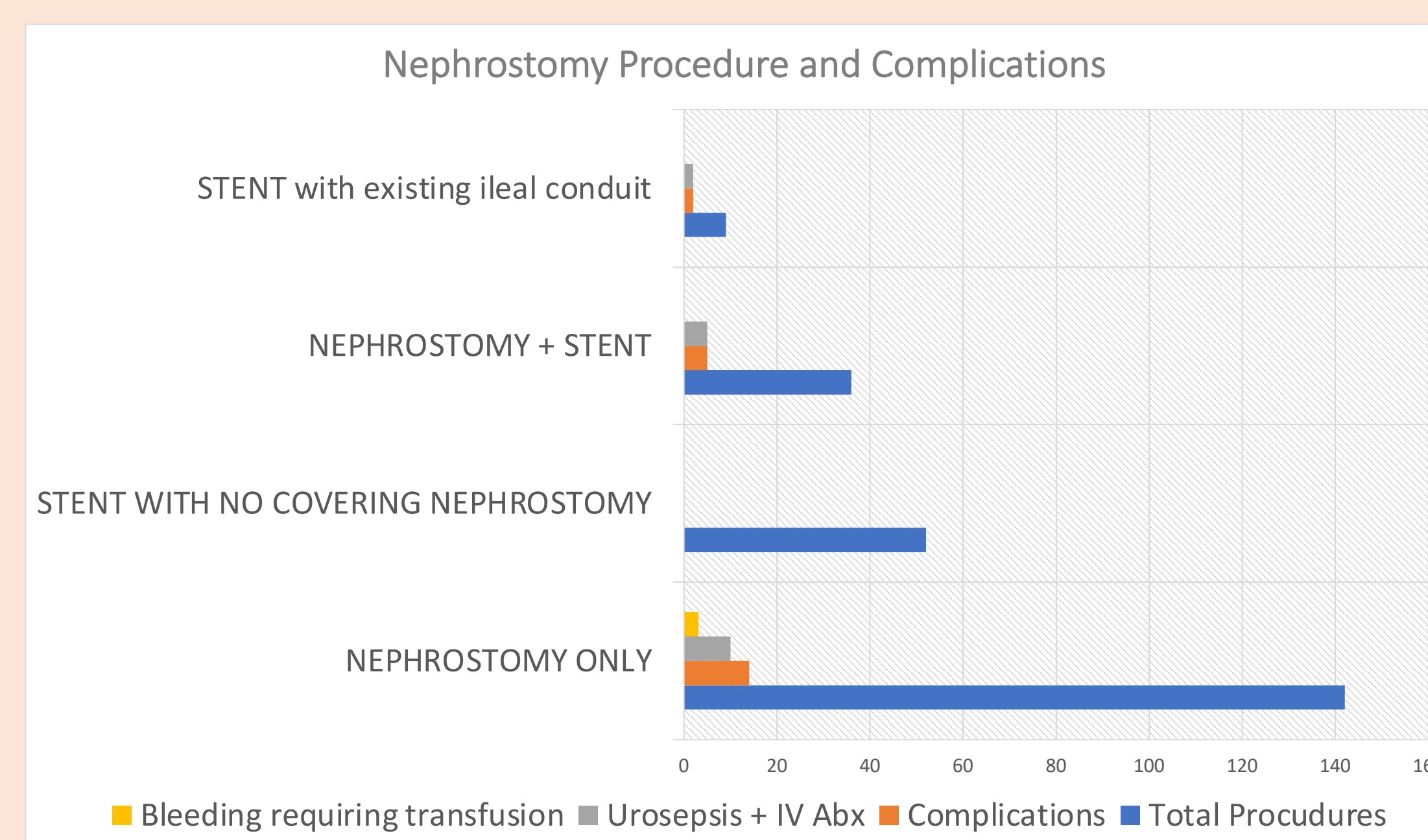
Complications

- Definition: Complications within <30days and requiring admission
- Exclusion:
 - Haematuria not requiring transfusion
 - Blood transfusion due to long-standing anaemia³
 - Pyrexia post-nephrectomy with prophylactic antibiotic on discharge

Results

Procedures	
Nephrostomy only	142
Stent with no covering nephrostomy	52
Nephrostomy + stent	36
Stent with existing ileal conduit	9
Total no. of cases	239
Complications by procedure	
Nephrostomy only	14
Stent with no covering nephrostomy	0
Nephrostomy + stent	5
Stent with existing ileal conduit	2
Type of complication	
Urosepsis requiring IV Antibiotics	17
Bleeding requiring Embolisation	0
Bleeding requiring transfusion and extended stay	3
Total no. of complications	21

Procedures	Sex		Indications							Complications	
	Male	Female	Cancer	Obstruction (stones/stents)	Ketamine bladder	Poor functioning kidney	AGS	Painful bladder syndrome	Infection	IV Abx	Blood transfusion
Nephrostomy only	96	63	124	31	2	1	0	0	1	10	3
nephrostomy + new uteric stents	46	24	60	9	0	0	1	0	0	5	0
nephrostomy + new ileal conduit stents	6	4	7	2	0	0	0	1	0	2	0



Result Analysis

Only 2 types of complications required overnight stay (**8.37%, 20/239 patients**):

- 17patients had **pyrexia requiring IV antibiotics** (7.11%, average length of stay 5days)
 - 5 documented as sepsis, 4 drained pus, other 7 unclear causes and documented as pyrexia
- 3patients had **bleeding requiring transfusion** (0.01%, all had anaemia of chronic disease therefore were not true complications)

Conclusion

Safe to have New nephrostomy insertion as a Day-Case Procedure

Potential guidelines:

- Local protocol establishing appropriate indications for antibiotics (signs of sepsis, multiple pyrexial episodes)
- Low threshold admission reserved for pus aspirating from kidneys and bleeding causing haemodynamic instability

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