

Tunnelled Peritoneal Drainage Catheter: Experience from a Tertiary Care Centre.

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Introduction

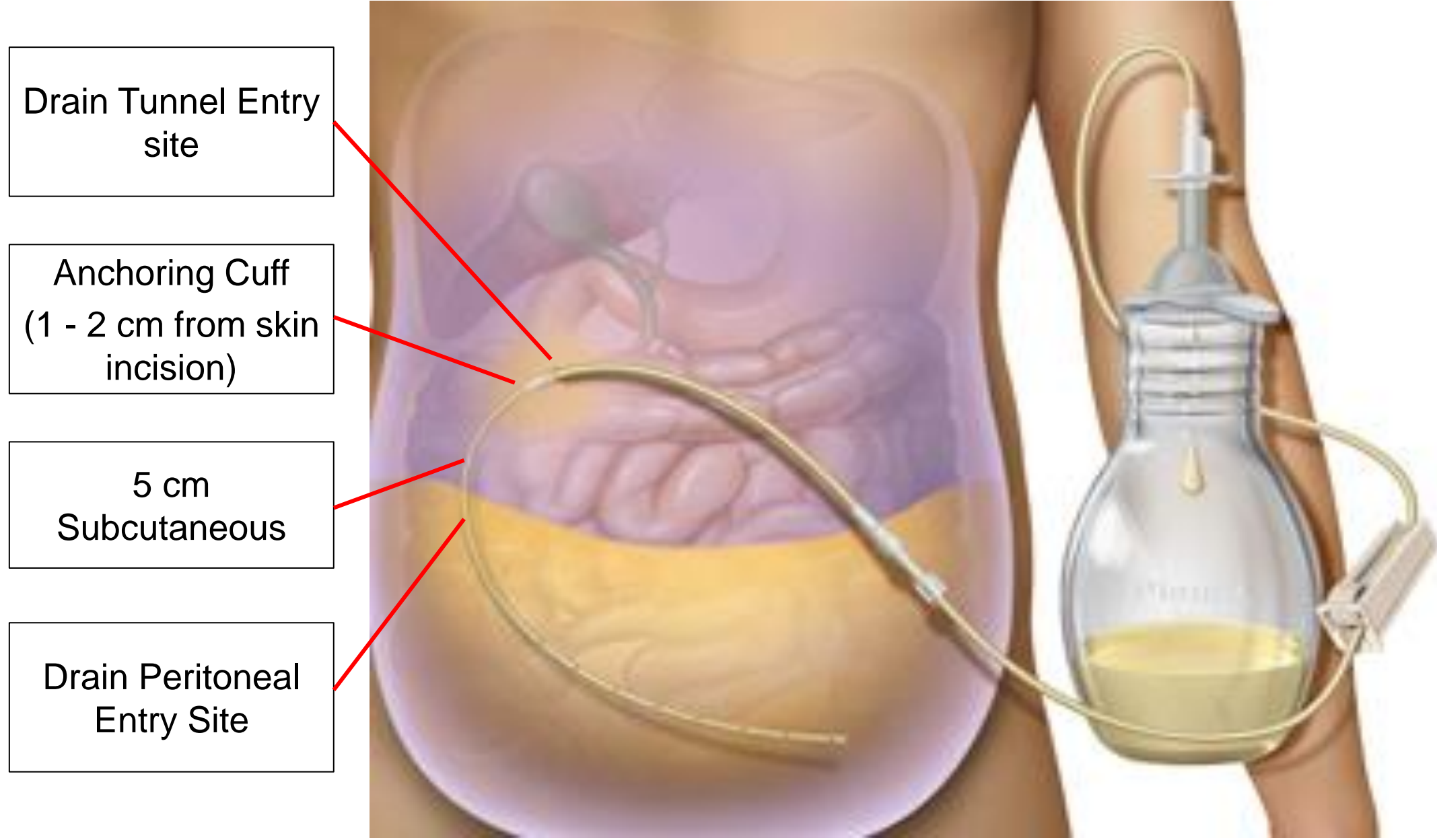


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Tunnelled Peritoneal Drains (TPD) have become an integral part of palliative care for managing symptomatic, recurrent pleural effusion, and abdominal ascites. The catheters are implanted in the abdominal cavity as a long-term alternative to repetitive large-volume paracentesis to relieve the symptomatic accumulation of abdominal fluid. It provides a minimally invasive and convenient way for patients to manage their condition outside of traditional healthcare settings, improving respiratory function and enhancing quality of life.

We describe our experience with TPD for patients with symptomatic malignant ascites over the course of a year. The aim of our audit was to evaluate the efficacy of tunnelled peritoneal drains in the management of recurrent ascites.

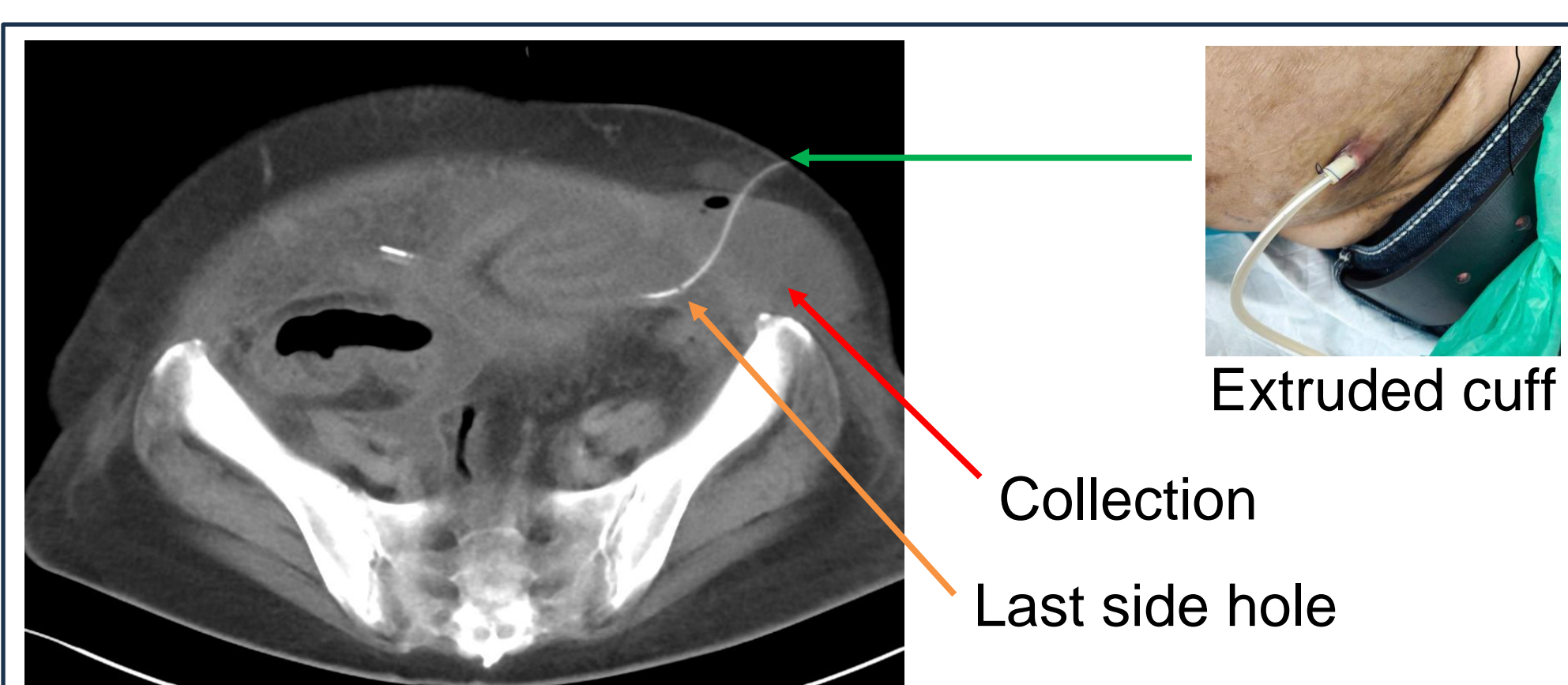
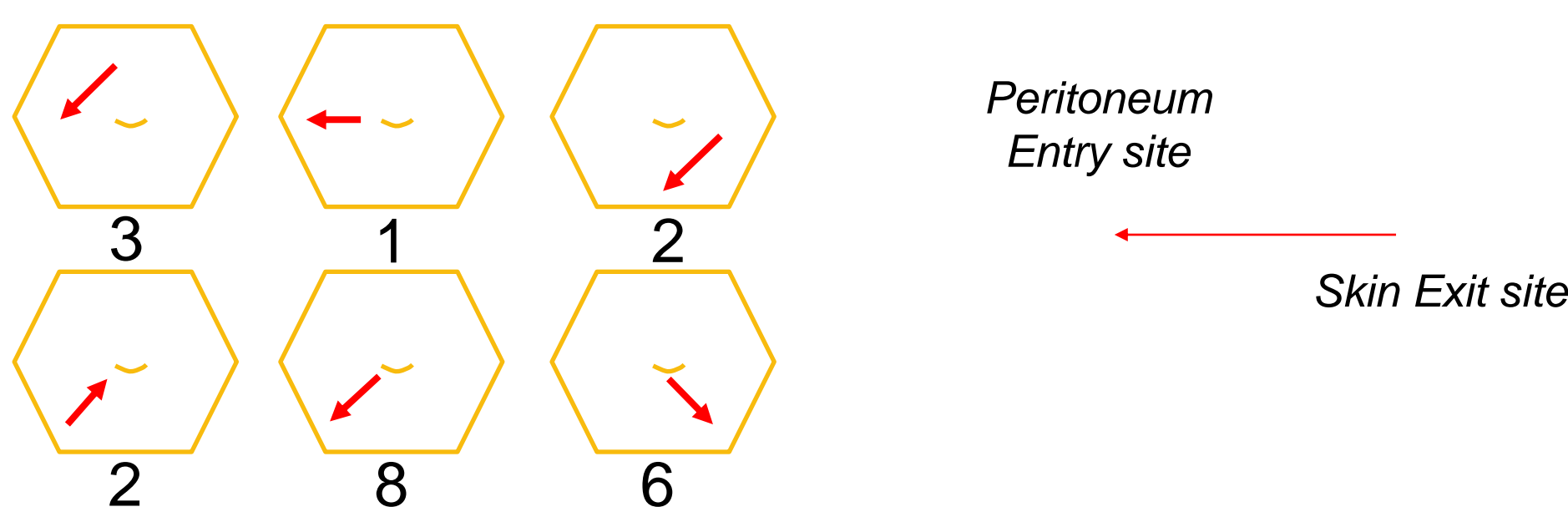
Methods

A retrospective audit of TPD cases conducted between March 2021 and April 2022.

Results

Characteristics	n (%)
Total patients	22
Technical success	22 (100)
Age	
Median	72
Range	56-91
Aetiology of ascites	
HCC	6 (27.3)
Cholangiocarcinoma	4 (18.2)
Upper GI malignancy	2 (9.1)
Lower GI malignancy	3 (13.6)
Breast cancer	1 (4.5)
Pancreatic cancer	1 (4.5)
Ovarian cancer	1 (4.5)
Appendiceal cancer	1 (4.5)
Myelofibrosis	1 (4.5)
Cirrhosis	2 (9.1)
Referral pattern	
Previous drains	15 (68.2)
No previous drains	7 (31.8)
Direct primary referral	5 (22.7)
Recommended by IR	2 (9.1)
Follow-up	
Catheter removed	4 (18.2)
Catheter in situ, patient alive	3 (13.6)
Patient demised	13 (59.1)
Lost to follow-up	2 (9.1)
Complications	
Catheter leakage	1 (4.5)
Pus discharge from exit site	1 (4.5)
Dislodgement	1 (4.5)
Hypotension	1 (4.5)
Subcutaneous abscess	1 (4.5)

Placement of Line



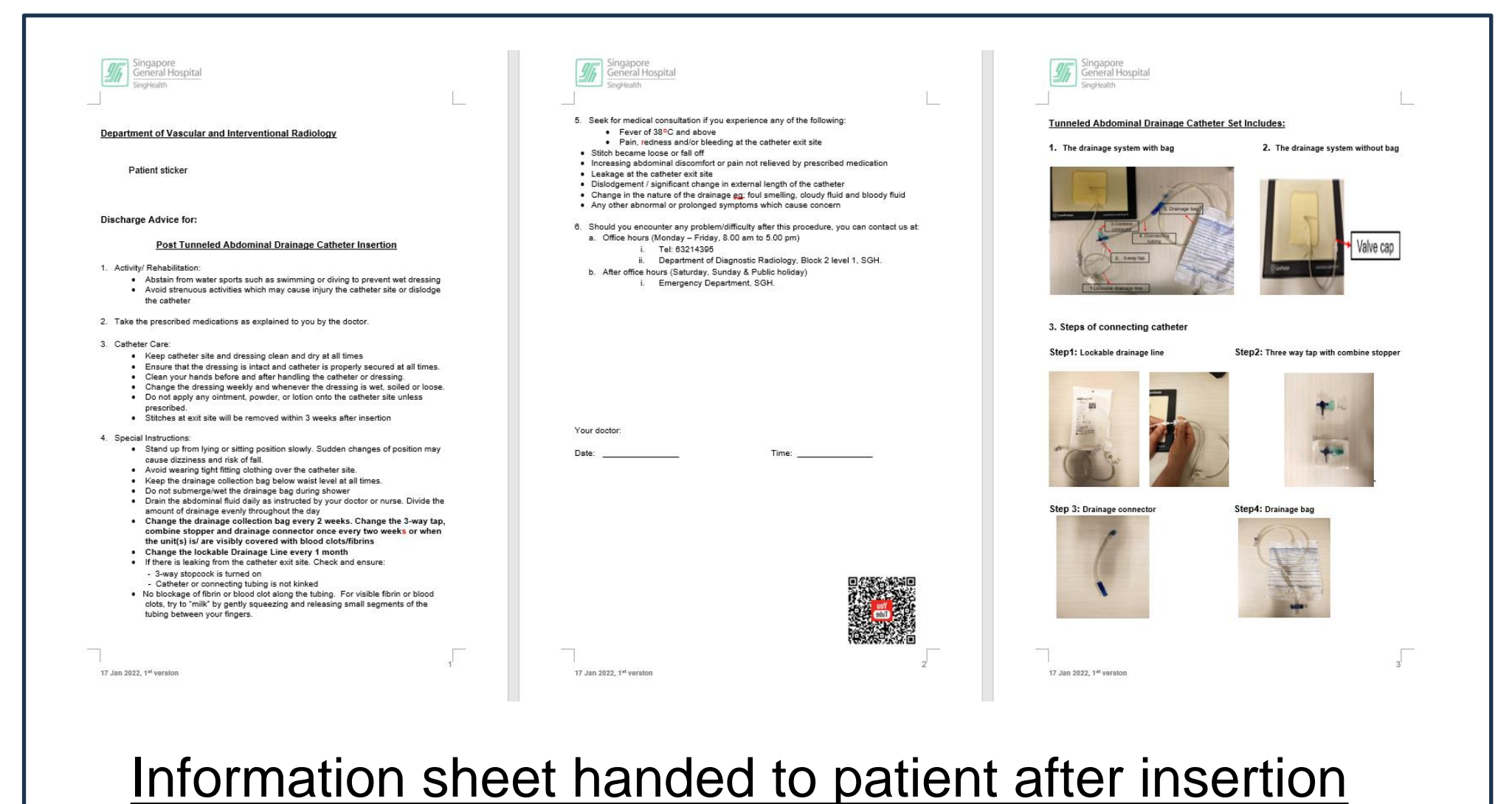
Axial CT image showing dislodgement of catheter causing a subcutaneous collection

A Quick Comparison

Self-retaining Catheter	Tunnelled Peritoneal Drain
Polyethylene	Silicon
Temporary	Lasts longer
Easily dislodged	Cuffed
Easily kinked	Lower infection rate
	More easily managed by patient
	More expensive
	Insertion requires tunnelling, removal requires cuff dissection

Discussion

This is the first study audit of the use of TPDs in our institution. Our audit has demonstrated that TPDs are safe and offer clear benefits for patients, particularly in an outpatient setting. This can be further enhanced with robust patient/caregiver training and nursing support.



Information sheet handed to patient after insertion

Cost-analysis studies have shown that managing ascites with tunnelled peritoneal drainage catheter systems offer cost savings and decreased hospital bed-days when compared with inpatient paracentesis.¹

Complications occurred in 5 out of 22 patients (22.7%), including leakage, pus formation, dislodgement, and hypotension. These patients were admitted and managed medically. Of these patients, two drains required re-insertion. This audit has shown the need for access to dedicated nursing care in patients after the insertion of the catheter for prompt troubleshooting.

Conclusion

Tunnelled Peritoneal Drains are feasible, safe, cost-effective, and potentially represent the standard of care for patients with recurrent malignant ascites.

References

- White J, Carolan-Rees G. PleurX peritoneal catheter drainage system for vacuum-assisted drainage of treatment-resistant, recurrent malignant ascites: a NICE medical technology guidance. Applied health economics and health policy. 2012 Sep;10:299-308.