

INTRODUCTION

At Northwick Park Hospital, overnight registrars commonly arrange next-day ultrasound for patients with testicular pain >24 hours via the Surgical Assessment Unit (SAU). This practice increases daytime workload, consumes limited acute radiology slots, and often does not alter clinical management. Management of testicular pain lasting more than 24 hours remains a clinical grey area, requiring careful evaluation and individualized treatment decisions. The audit evaluated this practice against both local and national guidelines. The current local guideline lacks clarity, visual aids, and adult-specific recommendations. National GIRFT guidance offers clearer pathways but is paediatric-focused.

AIM

To evaluate the clinical impact of next-day testicular ultrasound for pain >24 hours and determine whether this practice leads to meaningful changes in patient management. Focusing on identifying inefficiencies in current imaging pathways, the audit also aimed to inform the development of clearer local guidelines for managing testicular pain >24 hours.

METHOD

This audit was conducted at Northwick Park Hospital between October 2024 and February 2025. Both retrospective and prospective patient data were collected. Inclusion criteria: patients presenting with testicular pain >24h and booked for a next-day ultrasound via the Surgical Assessment Unit (SAU). Data were gathered from daily handover lists and electronic records (Cerner), using a pre-designed Excel tool. A total of 19 patients met the inclusion criteria. Current local and national guidelines were used as the benchmark for comparison.

Metric	Value
Mean Age	25.4
Average time since pain onset at presentation	5 days 14 hours

RESULTS

Nineteen patients met the inclusion criteria over a 5-month period (mean age 25.4 years). Only **3 patients (15.8%)** experienced a categorical change in management following next-day acute ultrasound - two underwent scrotal exploration and one had further imaging arranged. In both surgical cases, the procedure had already been offered on clinical grounds prior to imaging but was initially declined. The majority (**47%**) were discharged home without change to their plan, **27%** were sent home with antibiotics ± clinic follow-up, and **11%** had follow-up only. Notably, **21%** of patients were not reviewed by an on-call registrar prior to their scan, indicating a potential gap in pre-imaging assessment.

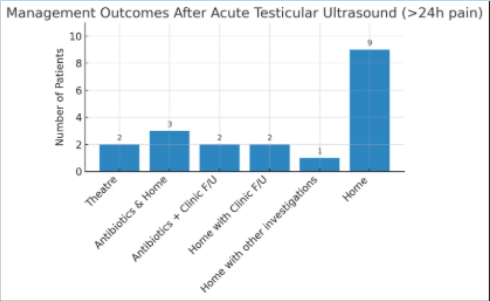


Figure 1 - This chart illustrates the management outcomes for patients who underwent an acute testicular ultrasound for pain lasting more than 24 hours. The data indicates that the most common management outcome was discharge to home, with 9 patients. Other outcomes included theatre (2 patients), antibiotics and home (3 patients), antibiotics with a clinic follow-up (2 patients), home with a clinic follow-up (2 patients), and home with other investigations (1 patient).

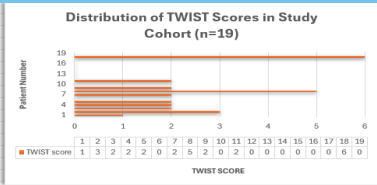


Figure 2 - This bar chart illustrates the TWIST score of each patient. The chart highlights specific cases, including one patient with a score of 6 who was diagnosed with a "missed torsion," another with a score of 5 who was found to have a complex hydrocele, and a patient who required scrotal exploration and had a score of 0.

Key messages for Clinical Decision-making

These findings provide an insight into current practice, its limitations, and the need for new guidelines.

1) Re-evaluate the necessity of routine next-day ultrasounds: Most scans did not alter patient management, indicating a potential for the overuse of acute radiology resources.

2) Prioritize pre-ultrasound clinical assessment: A significant number of patients were not reviewed by a registrar, highlighting the need for a thorough clinical assessment to prioritize scans and reduce workload.

3) Implement a clear, local guideline: Ambiguous guidelines necessitate the development of a clear, locally-agreed-upon flowchart to standardize practice and aid clinician decision-making.

4) Rely on clinical judgment for high-risk cases: Strong clinical judgment proved effective in correctly identifying patients needing surgical exploration, underscoring its importance in decision-making.

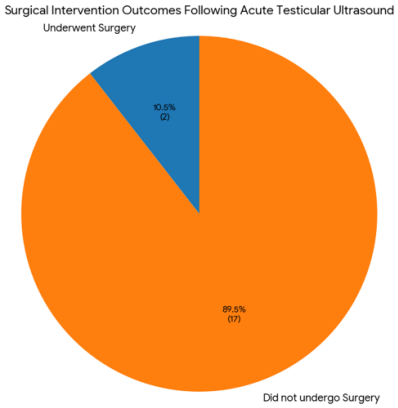


Figure 3 - This pie chart illustrates the surgical intervention outcomes following an acute testicular ultrasound for a total of 19 patients. The chart shows that 2 patients (10.5%) underwent surgical intervention, while the remaining 17 patients (89.5%) did not.

Number of patients referred to Urology	Number of patients seen by on-call registrar prior to USS	Number of patients NOT seen by on-call Registrar prior to USS	% of total referred patients not seen by on-call Registrar prior to USS
19	15	4	21

Table 1- Table illustrates the pre-ultrasound assessment of patients by on-call registrars, showing that out of 19 referred patients, 4 (21%) were not clinically reviewed prior to their scan.

CONCLUSIONS

Next-day acute ultrasound for testicular pain lasting more than 24 hours rarely resulted in a change in management, with only 3 of 19 patients (15.8%) requiring a different course of action after imaging. Nearly half were discharged without alteration to their initial plan, and over one-fifth were not clinically reviewed before scanning. These findings suggest that current practice may overuse limited acute radiology resources for low-yield cases and highlight the need for a clear adult guideline with mandatory pre-scan review to improve triage, reduce unnecessary imaging, and optimise patient flow.

References



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