

# AN AUDIT CYCLE OF THE ASSESSMENT AND MANAGEMENT OF PAEDIATRIC PATIENTS UNDERGOING EMERGENCY SCROTAL EXPLORATION AT A DGH

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## 1 - Aim

- 'Gold standard' investigation and treatment of testicular torsion is **emergency scrotal exploration** within **4-6 hours**, with delays increasing the risk of orchidectomy; therefore, paediatric patients over 5 years old are **managed locally by general surgery**
- The **NCEPOD Twist and Shout** report discussed use of the **TWIST score** and **Doppler ultrasound** significantly increasing finding torsion at exploration without increasing orchidectomy rate
- **GIRFT** subsequently published a **testicular torsion pathway** responding to those findings and recommendations
- Our aim was to audit practice in our district general hospital general surgery department against this national pathway

## 2 - Method

**PAEDIATRIC TESTICULAR TORSION**

**Complexity**  
e.g. undescended testis/anaesthetic risk

**<5 years old** → Refer to QMC paediatric surgery

**5-16 years old** → Refer to KMH general surgery registrar

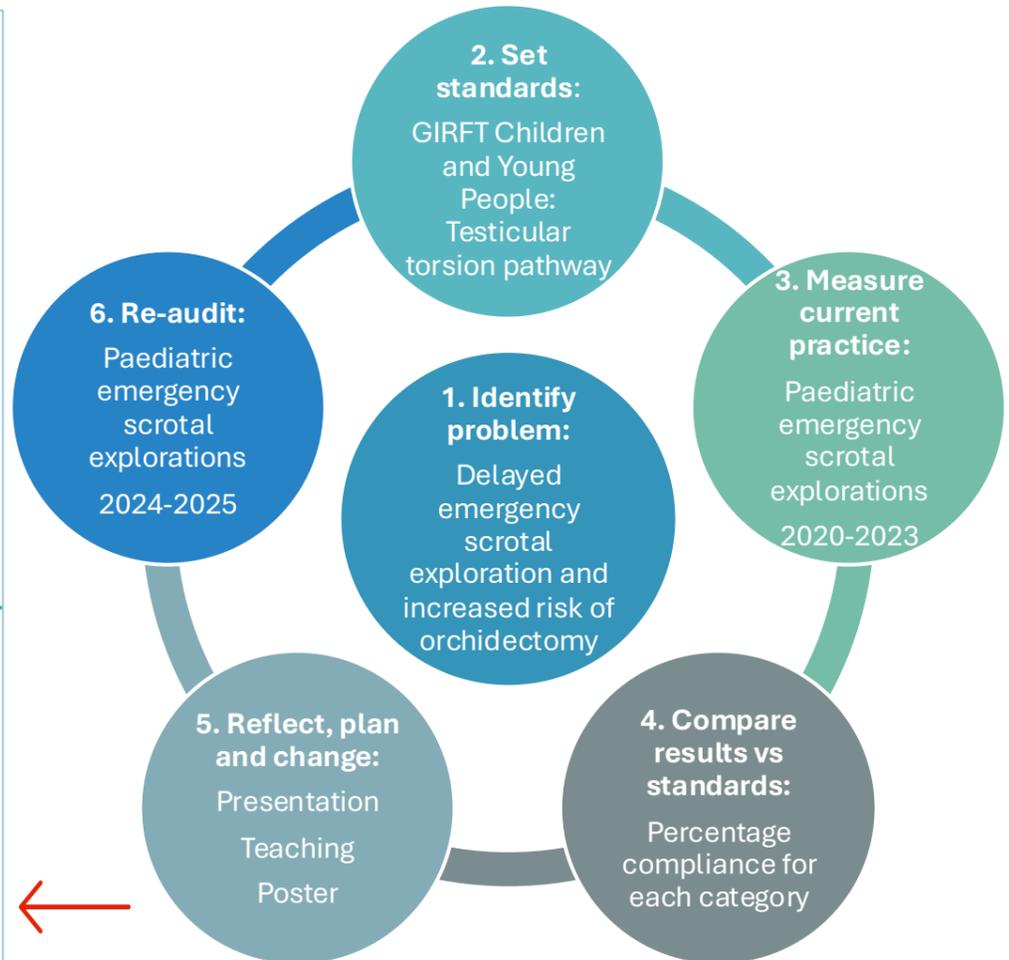
**Findings:**  
 Testicular swelling: No 0, Yes +2  
 Hard testis: No 0, Yes +2  
 Absent cremasteric reflex: No 0, Yes +1  
 Nausea/vomiting: No 0, Yes +1  
 High riding testis: No 0, Yes +1

**Risk:**  
 0-2: Low  
 3-4: Intermediate  
 5-7: High

**Recommendation:**  
 No USS: Sensitivity 98.4%  
 USS: Specificity 97.5%

**Management:**  
 Exploration only: No FU needed  
 Orchidopexy: FU to assess for delayed testicular atrophy  
 Orchidectomy: FU to discuss prosthesis in late teenage years

**7.2 Full pathway diagram**  
 Presentation and referral → Assessment → Management including surgery and follow up



## 3 - Results

GIRFT Children and Young People: Testicular torsion pathway standards	Audit n=23	Re-audit n=15	
Should be seen in <b>1 or fewer healthcare settings</b> prior to being in a centre which can undertake definitive surgical management	70%	69%	-1%
Should be seen by a <b>surgical decision maker within 60 minutes</b> of arriving in ED	40% Median =1h26m	50% Median =59m	+10%
A <b>TWIST score</b> should be used to support a structured assessment	0%	0%	-
A <b>TWIST score of ≥ 5</b> when < 48 hours of pain mandates a scrotal exploration in the absence of an alternative diagnosis that would significantly change management	0%	0%	-
Ultrasound: - if there is a strong suspicion of an <b>alternative diagnosis</b> that would significantly change management - as an <b>adjunct</b> to diagnosis of torsion when < 48 hours of pain if it does not result in a significant delay to treatment - if the pain has been present for <b>≥ 48 hours</b>	18% =2/11	50% =1/2	+32%
When < 24 hours of pain and a decision for theatre, should be <b>in theatre within 1 hour</b> of that decision being made	0% Median =1h40m	0% Median =1h35m	-
Those who have had an <b>orchidectomy should have a follow-up</b> outpatient appointment	67% =4/6	75% =3/4	+8%

## 4 - Conclusions

- Despite the interventions, the TWIST score is not being documented, use of ultrasound is low, and target time to review and theatre is not being met
- Causes are likely multifactorial, but may include **multi-specialty cultural and system factors** and a potential **lack of understanding** of a paediatric emergency among general surgery residents
- We aim to look at these **attitudinal and systemic barriers**, ensure continued **teaching** as residents rotate, and clearly display the **guideline posters**

General surgery trainee and consultant survey on managing paediatric patients

**REFERENCES**

Getting It Right First Time (2024) GIRFT Children and Young People: Testicular torsion pathway <https://gettingitrightfirsttime.co.uk/wp-content/uploads/2025/12/Paediatric-testicular-torsion-pathway-guide-FINAL-V2-January-2026.pdf>

Getting It Right First Time (2021) Paediatric General Surgery and Urology, GIRFT Programme National Specialty Report <https://gettingitrightfirsttime.co.uk/wp-content/uploads/2021/09/PaediatricSurgeryReport-Sept21w.pdf>

The National Confidential Enquiry into Patient Outcome and Death (2024) Twist and Shout [https://www.ncepod.org.uk/2024/testicular-torsion/Twist%20and%20Shout\\_full%20report.pdf](https://www.ncepod.org.uk/2024/testicular-torsion/Twist%20and%20Shout_full%20report.pdf)

Peeraully R et al (2019) Does the source of referral affect outcomes for paediatric testicular torsion? The Annals of the Royal College of Surgeons of England 101(6): 411-414

Peeraully R et al (2022) Does decentralisation of surgical management improve outcomes for paediatric testicular torsion? Journal of Pediatric Urology 18(3): 302.e1-302.e8

Qin KR and Qu LG (2022) Diagnosing with a TWIST: Systematic Review and Meta-Analysis of a Testicular Torsion Risk Score. The Journal of Urology 208: 62-70

Barbosa JABA et al (2020) Validation of the TWIST score for testicular torsion in adults. International Urology and Nephrology 53: 7-11