OBSERVATIONAL STUDY OF ADOLESCENT INGUINAL HERNIA REPAIRS IN A TERTIARY PAEDIATRIC SURGICAL DEPARTMENT

ROYAL ALEXANDRA CHILDREN'S HOSPITAL

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1 INTRODUCTION

Inguinal hernia repair is a common procedure in paediatric and adult populations[1].

Adolescent Inguinal Hernia (AIH) surgical approach has significant variation for a range of reasons[2]:

- **Heterogenous population**
- **Anatomy of defect** (patent processus vaginalis vs weakness of inguinal canal floor)
- **Surgical approach based on preference** of adult and paediatric surgeons

This study describes the operative management of AIH in a tertiary paediatric surgical unit in the UK

2 METHODOLOGY

Retrospective review (2019–2024)

All inguinal hernia repairs

Age range: 10–17 years

Single tertiary paediatric surgery centre, UK

All paediatric surgeons included

Outcomes: techniques, time, complications, follow up

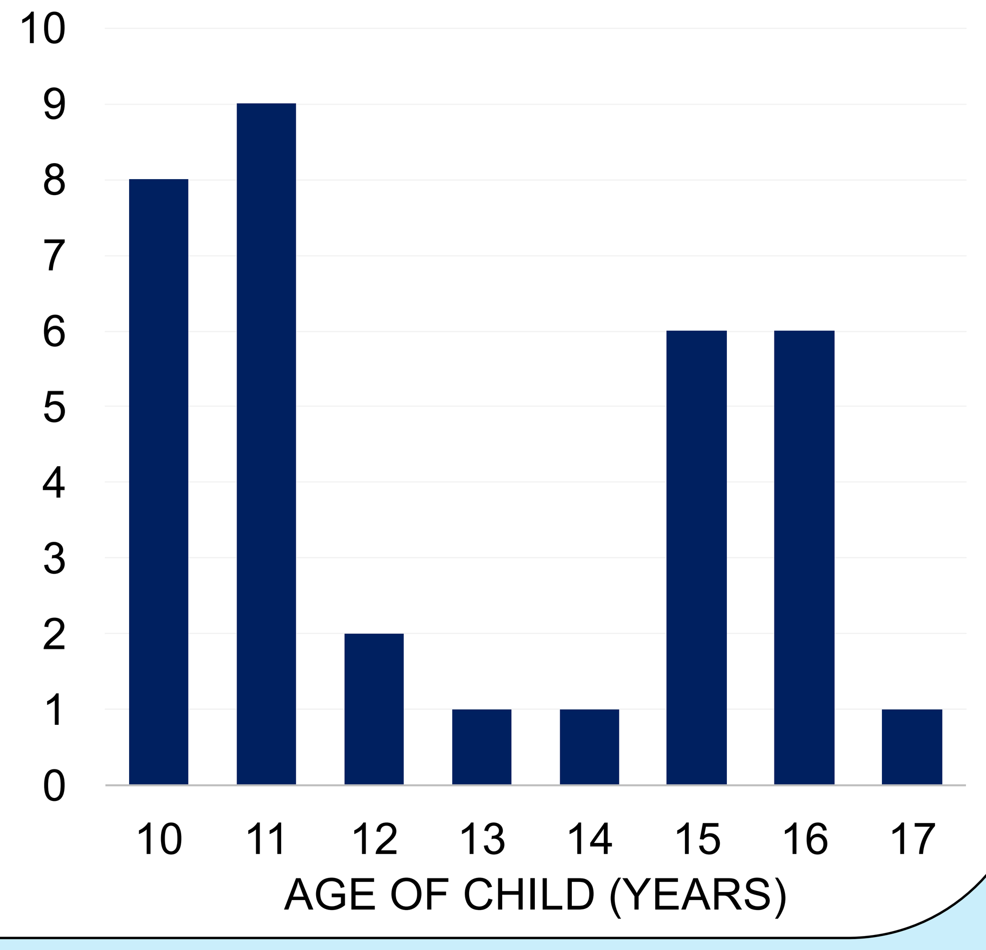
Analysis: SPSS v30

3 DEMOGRAPHICS

TOTAL PATIENTS n=33

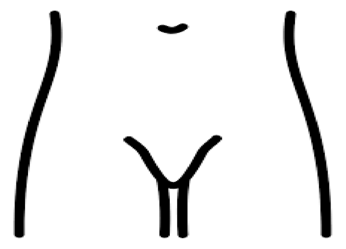
31/33 male patients (94%)

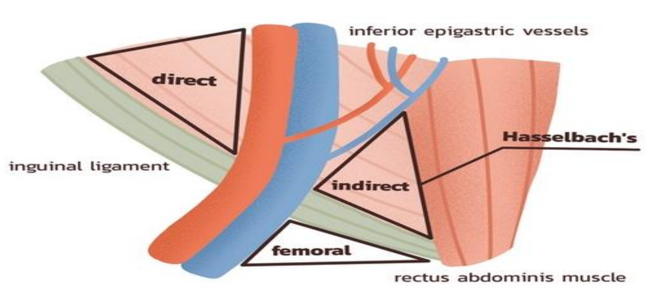
Age:
- Median age 12.28 years
- Range: 10.04 – 17.04 years



4 RESULTS

A) ANATOMY:





RIGHT n=22 (67%)
LEFT n=9 (27%)
BILATERAL n=2 (6%)

DIRECT inguinal hernia n=3 (9%)
INDIRECT inguinal hernia n=31 (91%)
Sliding hernia n=1

TOTAL INGUINAL HERNIAS n=35

5 RESULTS

B) PRE-OPERATIVE DATA:

Co-morbidities:
- No medical co-morbidities
- N=2 – Previous OPEN contralateral inguinal herniotomy

Pre-operative Imaging n=9
- Ultrasound n=9
- MRI n=1

C) OPERATIVE DATA:

TOTAL OPERATIONS n=34

One patient had recurrence operated on as an adolescent.
All repairs were completed on the pre-operatively planned side, with **no findings of incidental contralateral hernia/PPV.**

Operator details:
- Consultant Paediatric surgeons n=7
- Trainee surgeon as primary operator: 11/34
  - 7/11 Open
  - 4/11 Laparoscopic
- Adult surgeons involved in 2 cases (involving mesh)

	Laparoscopic	Open
Number (n)	22 (65%)	12 (35%)
Time (mins)	39.55 (SD=26.34)	46.92 (SD=29.01)
Technique	3/0 Prolene purestring (n=16) Diathermy of internal ring + Ethibond suture (n=5) Bilateral totally extraperitoneal (TEP) repair with Prolene mesh (n=1)	Standard Herniotomy (n=12) Sliding Hernia: • Deep ring closed and plication of posterior wall • 1x repair of recurrent hernia with mesh fixed with 2/0 Prolene

TABLE 1: Laparoscopic Vs Open repair

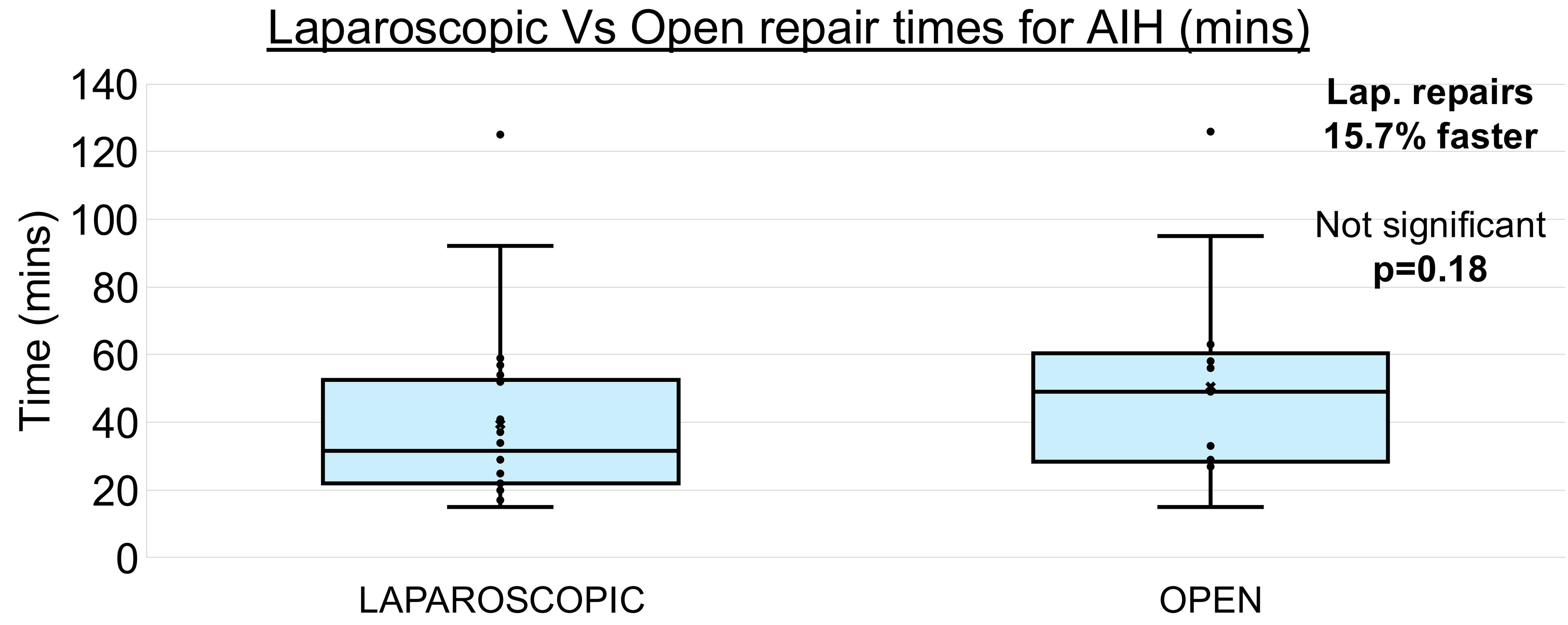


CHART 1: Laparoscopic Vs Open repair times (minutes)

D) OUTCOMES:

Recurrences n=2 (6%)
- **Patient 1:** Sliding hernia recurrence
  - Initial open repair w/ plication
    - Underwent open mesh repair of recurrence as adolescent
- **Patient 2:** Bilateral direct hernia
  - Initial bilateral TEP repair w/mesh
    - Ongoing outpatient review by adult team

Chronic Pain n=2
- Both patients who underwent mesh repairs

Follow-up
- 18 patients followed up (median 5.5 months)
- 2 patients DNA
- 11 patients – Community led follow up

6 CONCLUSION

These findings demonstrate **single-centre multi-surgeon outcomes** and **procedural variability** in **AIH repairs**, with **comparable outcomes** but **moderate complication rates.**

Laparoscopic internal ring closure (n=21) – **no recurrence nor complication.**

Recognised complications following mesh repair

8th WORLD CONGRESS of PEDIATRIC SURGERY
WOFAPS

REFERENCES:
1) Holzmacher J, Glenn I, Butano V, Amdur, R, Ponsky T, Vaziri K. Emergence of Direct Hernias during Adolescence May Signify Changes in Pediatric to Adult Inguinal Floor Physiology. Journal of the American College of Surgeons. 2019;229(4);166. [Accessed 22 October 2025]. Available from: https://www.researchgate.net/publication/336804272_
2) Bruns NE, Glenn IC, McNinch NL, Rosen MJ, Ponsky TA. Treatment of routine adolescent inguinal hernia vastly differs between pediatric surgeons and general surgeons. Surg Endosc. 2017;31(2):912-916. [Accessed 22 October 2025]. Available from: https://pubmed.ncbi.nlm.nih.gov/27357926/