

# AB184. SOH21AS221. A 10-year retrospective analysis of testicular torsion incidence among children and adolescents in Ireland

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**Background:** Testicular torsion (TT) is a urological emergency. TT most commonly occurs in a bimodal age distribution among neonatal (<1 years) and early adolescent groups. The incidence of TT is estimated as 4 per 100,000 population under 25 years old in the United States. Research regarding TT epidemiology in Ireland is lacking. The objective of this study was to derive incidence rates for TT among children and adolescents in Ireland.

**Methods:** A retrospective secondary data analysis of the Hospital In-Patient Enquiry (HIPE) database was carried out. Cases of TT among patients aged 0–19 treated in acute public hospitals between 2009–2018 were identified. Crude incidence and age-specific rates were calculated by cross-referencing with census data. Age-standardised rates were calculated using direct standardisation with the WHO World Standard Population.

**Results:** Between 2009 and 2018, n=1,555 males under 20 years were treated for TT in Ireland. The crude incidence was 23.72 cases per 100,000 population. The annual caseload increased steadily over 10 years, from 111 in 2009 to 197 in 2018. The age-standardised rate rose correspondingly from 18.11 per 100,000 population in 2009 to 29.01 per 100,000 population in 2018 under 20 years, an increase of 60%. N=253 (16%, annual rate 12–20%) underwent orchidectomy. Patients in the 0–4 years quartile

had the highest rate of orchidectomy (33%) which differed significantly from other age groups ( $P<0.01$ ).

**Conclusions:** TT appears to be more common in Ireland than the United States. Possible explanations include comprehensive data capture from HIPE, over diagnosis or climactic differences. Epidemiological data for TT in Ireland will help inform clinical guidelines, facilitate international comparisons, and improve public awareness of this condition.

**Keywords:** Epidemiology; orchidectomy; testicular torsion

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## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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