UK ophthalmologists' experience with Thyroid Eye Disease in Children (A National Survey)

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Introduction

Thyroid Eye Disease (TED) is rare in the paediatric population, but the risk of developing it in children and adolescents is comparable to adults.[1] This study aimed to survey the experiences of UK ophthalmologists in managing paediatric TED over the past 10 years (2012-2022), focusing on signs, severity, treatments, and outcomes.

Methods

An online survey was designed using clinical questions from previous publications of TED in children. This survey was circulated to ophthalmologists with a subspecialty interest in paediatric ophthalmology and strabismus. The questionnaire was designed to capture cases and their demographics in the last 10 years. Assurances were made with regards to confidentiality and anonymity in handling responses. An email reminder was also sent out to maximise responses. Data collected as detailed below:

- Demographics
- Thyroid hormone status (Hyper, Hypo, Euthyroid)
- Smoking status
- Examination findings
  - Dysthyroid Optic Neuropathy (DON)
  - Proptosis
  - Ocular motility dysfunction
  - Eye lid signs (lid retraction, lid lag)
  - Exposure keratopathy
- Management plan
- Outcome

Results

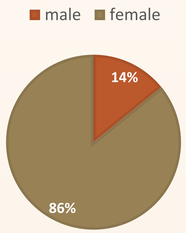
61 respondents from UK and Ireland

40 of those with experience with TED

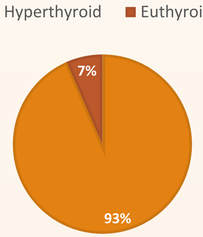
92 total cases reported over the last 10 years

2 cases were reported smokers

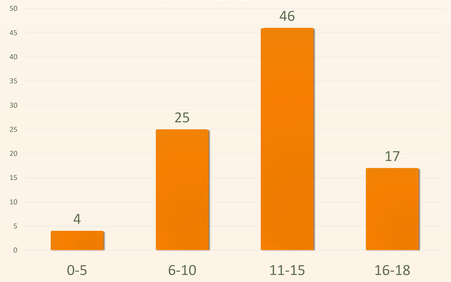
GENDER OF CASES



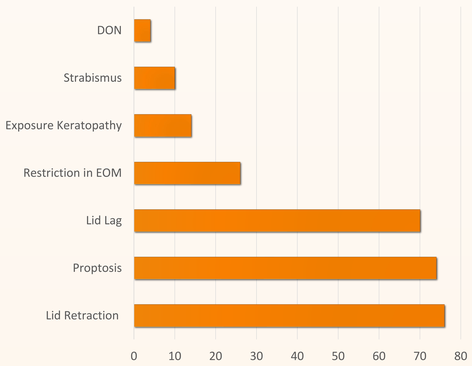
THYROID STATUS



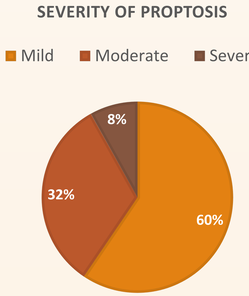
AGE AT PRESENTATION



ASSOCIATED SIGNS

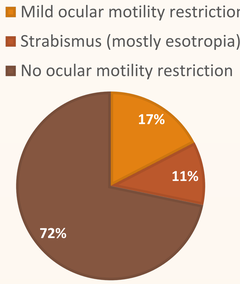


SEVERITY OF PROPTOSIS



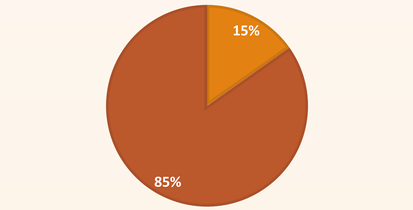
6 cases of severe proptosis of which 4 had orbital decompressions for cosmesis

OCULAR MOTILITY DYSFUNCTION



6/10 esotropia cases treated surgically

EXPOSURE KERATOPATHY



1/14 cases of exposure keratopathy required tarsorrhaphy

Management of DON (4 cases)

- All were treated with oral / pulsed steroids
- All were then subsequently treated with immunosuppression (such as Azathioprine)
- All underwent orbital decompressions
- 3/4 with permanent visual loss

Conclusions

This national survey confirms that paediatric TED is generally mild, with predominant soft tissue involvement, and is more common in adolescent girls. However, a significant minority of cases can develop severe complications such as DON and permanent visual loss. These findings challenge the traditional view that TED in children is benign. Vigilance is required, and close collaboration with paediatric endocrinologists is essential.[2] Early control of thyroid status—particularly using block and replace strategies—may reduce the severity of TED. Awareness of the potential for vision-threatening disease in this population is critical for timely referral and management.

References

1. Justyna Szczapa-Jagustyn, Gotz-Więckowska A, Jarosław Kocięcki. An update on thyroid-associated ophthalmopathy in children and adolescents. Journal of Pediatric Endocrinology and Metabolism. 2016;29(10). doi:https://doi.org/10.1515/jpem-2016-0122

2. Verity DH, Rose GE. Acute thyroid eye disease (TED): Principles of medical and surgical management. Eye. 2013;27(3):308-319. doi:https://doi.org/10.1038/eye.2012.284

Acknowledgements

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