Thyroid Eye Disease: Can We Improve Identification of Disease Activity and Drivers?

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BACKGROUND

- **Thyroid Eye Disease (TED)** can negatively impact quality of life and have sight-threatening complications[1,2]
- To determine appropriate management, clinical assessment should identify and grade the presence of active orbital inflammation[3].
- Guidelines recommend the use of the **Clinical Activity Score (CAS)** to do this[3,4]
- It also remains important to identify and control drives of disease, such as **smoking** and **endocrine dysfunction**[3, 5]

AUDIT AIM

- To identify if initial ophthalmology consultations at a tertiary centre documented assessment of disease activity and drivers.
- Assess the impact of an informative poster intervention on improving this process.

METHODS

- Electronic medical records were searched to retrospectively identify all patients who received a new diagnosis of TED from an ophthalmologist in a single tertiary centre between Jan 2020 – Jan 2024 (n=58).

Data Retrieved:

-Patient demographics
-Clinical Activity Score
-Presence or absence of inflammatory features
-Smoking status, pack-years
-Thyroid function
-Presence or absence of active sinusitis

- Following 1st audit cycle, an A4 poster intervention prompting ophthalmologists to document CAS and disease drivers was displayed in clinic. Initial re-audit performed Sept 2024 - Dec 2024.

1st AUDIT CYCLE RESULTS

***CAS** was reported in only **19%** of patients and **orbital inflammation** features documented in **52%**.*

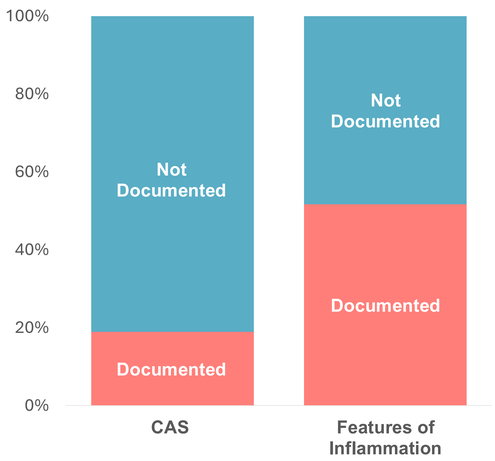


Figure 1: Proportion of TED patients in which CAS and features of orbital inflammation were reported

There was a shortcoming in the documentation of disease drivers

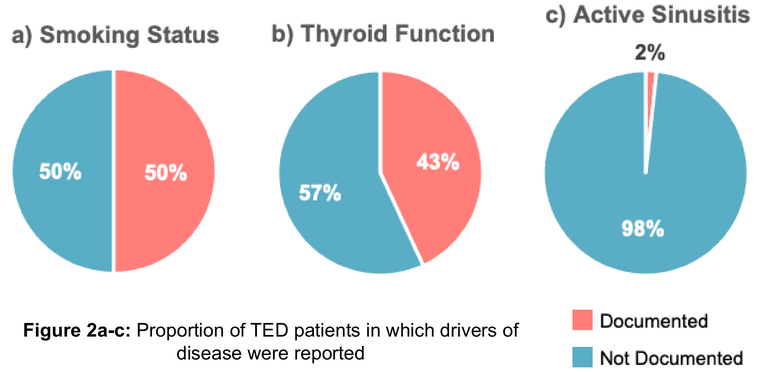


Figure 2a-c: Proportion of TED patients in which drivers of disease were reported

RE-AUDIT CYCLE RESULTS

- In the initial **re-audit cycle**, **documentation rates improved**, with clinical findings of **orbital inflammation**, **smoking status** and **endocrine dysfunction** recorded in **100%** of patients.

CONCLUSION AND NEXT STEPS

- In newly diagnosed TED patients, there is a **notable shortcoming in documentation of disease activity and identification of disease drivers**, such as smoking.
- Visually accessible local poster guidelines for assessing and documenting TED referrals may improve this.
- This may help control disease drivers and allow more objective assessment of treatment response.

References: 1) Cockerham *et al*, Ophthalmology and Therapy, 2021, DOI: https://doi.org/10.1007/s40123-021-00385-8 2) Blandford *et al*, Expert Review of Ophthalmology, 2016, DOI: https://doi.org/10.1080/17469899.2017.1276444 3) Bartalena *et al*, European Journal of Endocrinology, 2021, DOI: https://doi.org/10.1530/EJE-21-0479 4) Mourits *et al*, British Journal of Ophthalmology, 1989, DOI: https://doi.org/10.1136/bjo.73.8.639 5) Thornton *et al*, Eye, 2016, DOI: https://doi.org/10.1038/sj.eye.6702603