

Paediatric Tinnitus & Hyperacusis Clinical Outcomes: Assessing Efficacy and Treatment Implications

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Introduction

Tinnitus, the perception of sound in the absence of an external stimulus, is a distressing condition affecting all ages. **Hyperacusis** is the increased sensitivity to sound and a low tolerance for environmental noise. These are commonly associated with adults, however it is increasingly recognized that children and adolescents also experience these debilitating symptoms. Focus on paediatric tinnitus remains limited and there is a critical need to establish specialized clinics tailored to address the unique challenges faced by this population.

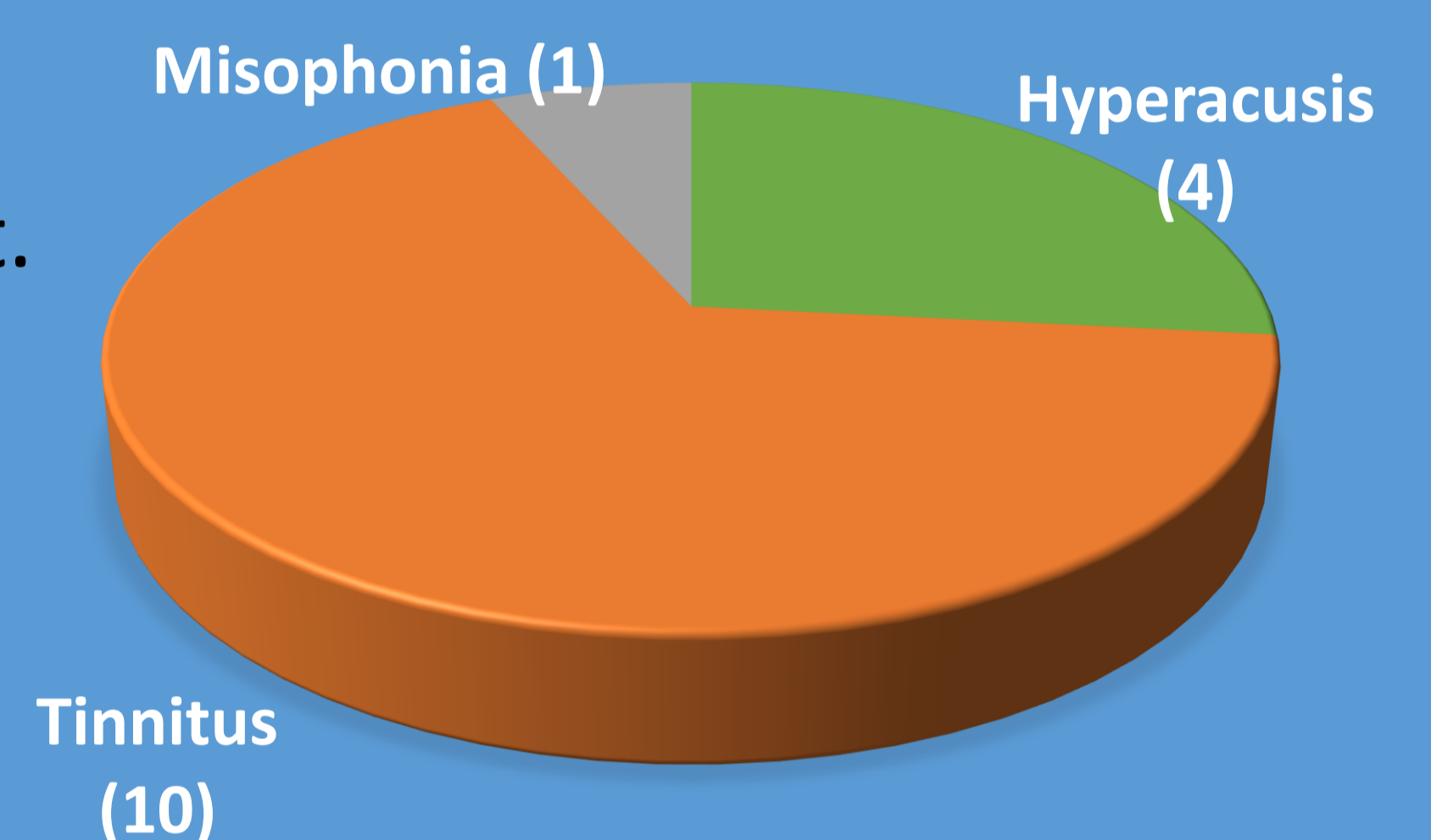
The purpose of this study was to:

- investigate the outcomes of a dedicated Paediatric Tinnitus Clinic
- evaluate the efficacy of various interventions
- explore the implications for treatment.

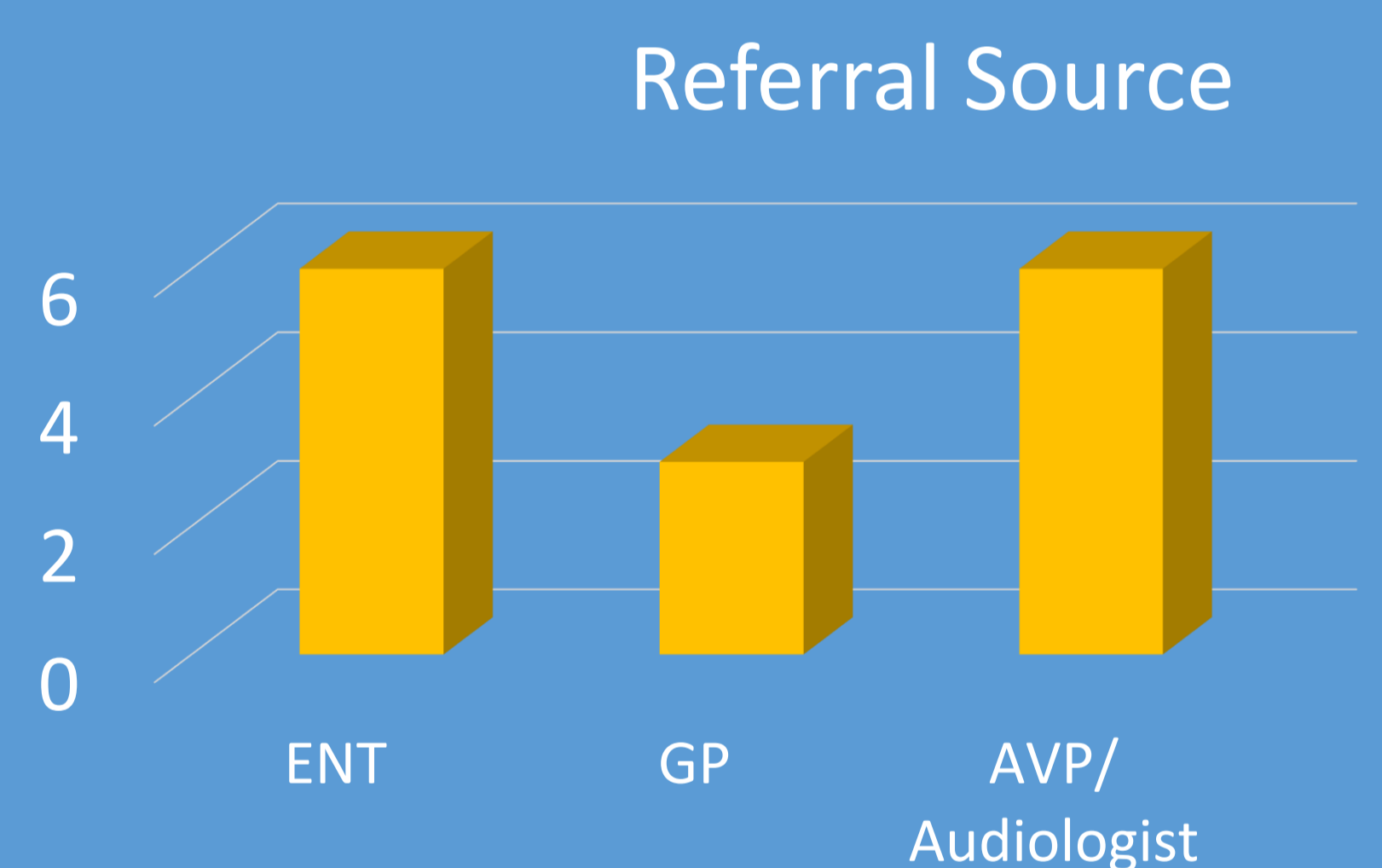
By comprehensively examining the outcomes of this dedicated clinic, we aim to contribute valuable insights into the management of paediatric tinnitus, improve diagnostic protocols and enhance therapeutic approaches to mitigate the impact of tinnitus on the quality of life of affected children and families.

Methods and Results

- Retrospective case-note audit of referrals to the Paediatric Tinnitus clinic over a 30-month period (Jan 2021 – June 2023).
- Cohort = 15 children; Age ranged from 6-16 years old.
- All children had a full medical evaluation prior to acceptance onto the clinic.
- Additionally, age-appropriate questionnaires or visual analogue scales were carried out.
- Each child had a full audiological assessment.
- Those with a significant hearing loss were appropriately amplified



Measure	Results	Outcome	Results
Average referral to clinic time	29 weeks	Discharged with counselling	26%
Middle ear issues	40%	Fitted with Hearing aid	6%
Hearing loss	40%	Fitted with noise generator	26% (40% reduction in tinnitus score)
Comorbidities	26%	Further review	13%
Outcome measure (TFI, THI, VAS)	40% reduction in post-intervention score	Referred on for further investigations	26%



Discussion

- Approximately a **quarter** of those seen were **discharged** with targeted information sharing and counselling.
- Those referred for further investigations uncovered comorbidities including **Meniere's syndrome**, **vascular loop**, **NF1** and **ME**.
- Average referral-to-clinic time was calculated from the first report of tinnitus to the date seen on the tinnitus clinic. There were 2 outliers of >100 weeks wait from referral to date seen - this was due prolonged concurrent treatment timeline of other otological comorbidities.
- Limitations** - outcome measures were used only 46% of the time. When used, there was a **40% reduction of reported tinnitus** in the post-treatment stage.
- The fitting of a **noise generator** also resulted in an average of **40% reduction in reported tinnitus**.
- Those needing further review had multiple concurrent socio-behavioural issues such as **ADHD**, requiring further counselling and support.

Conclusions

- Our findings demonstrate the range of outcomes of a specialized paediatric tinnitus clinic in addressing the unique challenges associated with tinnitus in children.
- Tinnitus in children is often overlooked, leading to delayed diagnosis and inadequate management. By offering a holistic approach, our clinic aimed to provide comprehensive care that considers the **physical**, **emotional**, **educational** and **social** aspects of tinnitus in children.
- The timely initiation of treatments - including **tinnitus retraining therapy**, **sound therapy**, **stress reduction**, **sleep hygiene**, **educational support** and **fitting of noise generators** - proved crucial in improving outcomes and enhancing the quality of life for our young patients.
- Our results underscore the importance of **dedicated Paediatric Tinnitus Clinics** in recognizing and managing this condition early, promoting awareness among healthcare professionals, and ensuring appropriate interventions for affected children.

References

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