Tinnitus and Hyperacusis Among Children and Adolescents in Denmark

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Tinnitus and Hyperacusis Among Children and Adolescents in Denmark

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Purpose
To gain more knowledge about the apparent mismatch between the epidemiological data regarding tinnitus and hyperacusis in children and young people in the literature and the data reported in clinical studies (1, 2).

Background
Studies report a larger variation in the prevalence of tinnitus in children than in adults. The majority of the studies have not ascertained tinnitus severity and/or complaint behaviour, the age range of children studied varies, and there are differences between definitions and measures. The findings are however broadly similar to the adult population, close to 30% (3).

1. a. Audiology departments

- Design: A retrospective case review of patients between 5 and 19 years with a primary complaint of tinnitus and/or hyperacusis seen at Danish Departments of Audiology during the last 5 years will be undertaken via The National Patient Registry. All medical records will be reviewed with a focus on hearing status, process (similarities and differences), severity and coping and treatment.

- Objective: To determine the numbers of children and young persons referred with a primary complaint of tinnitus (DH931) and/or hyperacusis (DH932B) to Departments of Audiology in Denmark within 01.01.09 - 31.12.13.

- To determine how these children/youth people came to be referred, and after how long, and how may previous medical consultations.

- To create a profile of the children / young people referred.

1. b. Ear, Nose and Throat specialists diagnosis and treatment

- Design: 16 ENTs working on the Danish island Funen will over a 6-month period provide a overview on their treatment and onward referral for children and adolescents aged 5-19 years diagnosed with tinnitus and/or hyperacusis.

- In cases where there is no need for further treatment, the ENT send a notification with a description from the medical record in order to get the child registered in the project.

- Objective: To investigate how children and young people are assessed and managed in the ENT’s practice in the area of Funen regarding diagnosis and treatment (including onward referral to a specialist centre) of tinnitus/hyperacusis.

1. c. Other centres of treatment

The educational-psychological advisory service (EPDS) in each municipality (there are a total of 98 municipalities in Denmark) will be notified by email with a questionnaire regarding each case they have treated or referred. Same methods will be used for the specialised centres.

Objective: To identify if children and young people aged 5 to 19 years are being referred and treated for tinnitus/hyperacusis at either EPDS or on specialized services for adults.

Methods
This poster provides an overview of three different studies included in the Doctoral study.

0. Systematic review of prevalence

- Aim: To find possible explanations for the high degree of variation between different epidemiological studies a systematic review of data of epidemiology of tinnitus and hyperacusis in children and young people (age 5 to 19) will be performed.

- Objective: To investigate which methodological factors may determine differences in prevalence estimates.

As children and young people are seen in various types of services, an overview is provided using a variety of data collection methods, divided into two studies:

1. Overview of present services of diagnosis, referrals and treatment


1. b. Ear, Nose and Throat specialists diagnosis and treatment. Prospective study

1. c. Other centres of treatment

2. Population Studies and a Profile analysis

2. a. Hearing status, tinnitus and hyperacusis in a child cohort

2. b. Profile Analysis of young people from The Danish National Health Survey (NATSUP) Cross-sectional study

FIGURE 1 Overview of present services of diagnosis, referrals and treatment

FIGURE 2 Self-portrait of boy age 8 with tinnitus

Results
Not all studies are performed yet.

1. c. Preliminary results are showing the majority of centres are not treating children with tinnitus.

2. b. Data from 2010 has been extrapolated. Data from 2013 will be issued May or June 2014.

Discussion
Study 1.c highlights the difficulties on getting a broad overview on the treatment.

Data collection is time-consuming and lack of electronic records management systems will probably be a bias for answering correctly for some EPDS’s. There also seems to be a very informal way of referring and lack of National Guidelines could be a part of the reason of the large variation of the service provided.

References:

Acknowledgements:
David Baguley, PhD MBA, Consultant Clinical Scientist, Head of Audiology, Cambridge University Hospitals, Visiting Professor – Anglia Ruskin University, Cambridge University Hospitals NHS Foundation Trust
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FIGURE 2 Self-portrait of boy age 8 with tinnitus

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