



Recognition of paediatric otopathology by General Practitioners[☆]

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Summary

Objective: General Practitioners (GPs) are required to diagnose a number of common ear pathologies on a regular basis. In particular, otitis media with effusion (OME) can be well managed in primary care if a reliable diagnosis can be made. We set out to assess the confidence and ability of GPs to diagnose otopathology, as well as the access that they had to tympanometry and pneumatic otoscopy to assist in making their diagnoses.

Methods: Twenty GPs were shown a series of forty slides, half with OME and half with normal tympanic membranes; they were then asked to state whether each image represented an ear with OME or not. The same GPs were then shown 20 slides, half of which were ears with a common pathology and half were normal; the participants were asked to state whether the slide was of a normal ear or make a diagnosis of the pathology. Access to equipment and previous training were assessed via a short questionnaire.

Results: The median score for the correct diagnosis of OME was 53% (range 30–67.5%), only slightly higher than chance. The participants correctly identified that an ear was abnormal for a mean of 80% of the time (range 65–95%), but were only able to make a correct diagnosis of the pathology for a mean of 41% of the ears (range 20–80%). No participant had access to pneumatic otoscopy or tympanometry in their practices.

Conclusions: GPs have difficulty in correctly diagnosing OME from otoscopy alone, but are able to determine the presence of other otopathology. They were less able to diagnose specific abnormalities.

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1. Introduction

Current UK healthcare policy seeks to provide more ENT care in a primary care setting by General Practitioners (GPs), particularly those with a specialist interest in ENT (GPwSI) [1]. However, this practice puts an additional weight onto the shoulders of GPs, who will be required to initiate the management of ENT conditions rather than referring them to secondary/specialist care.

Many GP surgeries remain without basic ENT diagnostic equipment such as tympanometry and access to pneumatic otoscopy [2]. Several trials have reported on the feasibility of tympanometry in primary care, concluding that with adequate training it remains a reliable and sensitive tool [3]. Similarly, assessment of membrane mobility via pneumatic otoscopy can have high diagnostic value: compared to tympanometry it is an inexpensive technique and has an equal ability to improve the diagnostic skills of GPs [4].

We set out to evaluate the otoscopic diagnoses of middle ear pathology by GPs, their confidence in their ability, and their access to diagnostic equipment. The focus was primarily on otitis media with effusion (OME), a childhood illness with a high prevalence and one whose early stages can be managed in primary care. Further otopathology was included to create an understanding of the general otoscopic skill and knowledge base of a group of GPs.

2. Methods

Forty GPs were invited to attend an ENT training morning during which the research was conducted; participation in the research was voluntary. The questions were based around a short answer sheet/questionnaire and slide presentation, divided into three sections.

2.1. Section one

Participants were asked to distinguish between oto-endoscopic photographs of ears with OME and those without OME (40 images total; 20 OME and 20 No OME, see Figs. 1 and 2). Images of normal ears and ears with OME were chosen sequentially in the outpatient department; ears with OME were diagnosed when a type B trace on the tympanogram was found in the presence of a normal canal volume and an air-bone gap of at least 10 dB.

2.2. Section two

Participants were asked to distinguish between oto-endoscopic photographs of normal and abnormal tympanic membranes (20 images total; 10 normal, 10 abnormal) and tick 'Normal' or write a diagnosis where appropriate. Abnormal tympanic membranes were chosen to represent a range of otopathology likely to be seen in primary care. The pictures were taken from the personal collection of one of the authors and only included pictures that had not been published previously. Table 1 shows the pathologies included.

In Sections 1 and 2, participants were asked to make a diagnosis for each image and were unaware of the proportion of pathology in each image set.

2.3. Section three

The third section consisted of six questions to assess access to equipment, training and confidence of the individual GP, whether they considered themselves to have a special interest in the field of ENT, and how long they had been a GP. Confidence in otoscopic skill was assessed on a visual analogue scale by asking participants to make a mark on a 10 cm line (0, no confidence; 10, extremely confident).



Fig. 1 Examples of images of ears with no effusion.

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