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# LETTER TO THE EDITOR


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## Diagnosis of preschool asthma: parents' comments and typical phrases may ease history-taking

Dear Sir

We read with interest the articles concerning diagnosis of preschool asthma by Søren Pedersen and Andrew Bush in the February issue of the *PCRJ*.[1,2]

Indeed, preschool asthma "is not easy to diagnose"[1], because both physical examination and investigation in preschool children are not very sensitive and specific. The first international consensus report established that a diagnosis of asthma in preschool children should be based "on the history and the efficacy of appropriate asthma therapy".[3] In line with Pedersen's comments,[1] the history and symptom assessment in children under five has to be obtained from the parents, with due emphasis on the frequency and severity of any cough, wheezing, breathing problems, sleep disturbance, and the relationship with trigger factors.

However, cough is not a specific symptom for asthma at all. Moreover, the problem with wheezing, the 'core symptom' of asthma, is that parents' understanding of wheeze differs from our understanding in academic terms.[4,5] Therefore the clinician's challenge is to ask good questions, based upon the typical preschool asthma pattern, and in the context of the parents' vocabulary and understanding.

Based upon previous qualitative studies on childhood asthma[4] and in combination with our experience from clinical practice, we developed detailed proposals to help Danish GPs in their history-taking of parent-experienced asthma symptoms.[6] We present here an English translation of a short excerpt which we hope helps GPs recognise when the parents present a typical history of asthma and when they don't.

**A typical case is:**

*A nine-month old boy is seen in the clinic with his parents. Since the age of four months, he has had several episodes of coughing lasting 2-3 weeks following a common cold. Over the last three nights he has coughed and rattled heavily for many hours. He has had trouble coughing up the sputum and a heavy breathing.*

*In the consultation the doctor finds the boy to be healthy, with a runny nose and normal auscultation findings. However, from the history the doctor suspects asthma and initiates a therapeutic trial of 800 mcg inhaled budesonide daily, which gives dramatic effects after just a few days. At review a week later, the parents say that the boy is almost symptom-free and that they have had their first undisturbed night's sleep in many weeks.*

Questioning the parents about the frequency and duration of their child's asthma symptoms is important. The parents' description of infant and preschool children's respiratory problems is often focussed on their child's cough. Asking the parents for more details, they often use some of the following phrases:

*Cough*: The cough is wet, with sputum.The child has sputum in the lungs and difficulties coughing up the sputum, sometimes vomits the sputum. The daytime cough is often triggered by laughing and physical activity.

*Wheeze*: The child rattles. Has a noisy breathing like snorting, grunting or whistling.

*Respiratory difficulties:* The child has heavy breathing, difficulty in breathing or gasps for breath.

*Disturbed sleep*: The cough and rattle is worse in the middle of the night, often lasting for hours so that the child is wakened.

*Mood*: The child tends to be moody, irritable and more tired than usual.

Pragmatically, the diagnosis of asthma must be considered when the child has had either a severe asthma attack or has had recurrent (more than three) periods of asthmatic symptoms lasting for longer than 2-3 weeks. The periods of asthma symptoms are very often triggered by colds and are frequent in humid seasons. Lung auscultation is often completely normal.

The diagnosis is based on the history and a therapeutic trial. Concurrent eczema, recurrent otitis media and pneumonia or a family history of asthma strengthens the hypothesis.[7] As Bush states,[2] consideration of other serious respiratory diagnoses is a part of the diagnostic process.

We recommend short-term (2-4 weeks) high doses of inhaled corticosteroids (ICS) as a therapeutic trial.[8] Using short-term ICS also prevents over-treatment. Cessation of symptoms during the treatment, with recurrence of symptoms after treatment has finished or at the next viral infection, increases the likelihood that the diagnosis is asthma. When the diagnosis is established, the treatment should be adapted to the individual child's asthma, in order to use the lowest effective dose – which may actually be intermittent treatment.[8]

Pedersen states that the history-taking of preschool asthma symptoms has not been validated.[1] We think that a multicentre

and multi-language study should be coordinated by the IPCRG in order to validate the different nuances of preschool asthma symptom history-taking.

Preschool asthma is highly prevalent. Under-diagnosed asthma causes much morbidity and, in the developing world, mortality. Hopefully, "preschool asthma will be easier to diagnose using parents` typical phrases".

**Conflict of interest declaration**

None.

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