



Nasal fiber optic examination for the assessment of adenoid hypertrophy: importance and precautions in diagnosis

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Nasal fiber optic examination with a flexible endoscope is a supplementary to the standard otorhinolaryngological examination that is indispensable to the evaluation of upper airway conditions in children.

The examination begins with an assessment of the nasal cavity and its structures up to the nasopharynx with a good view of the ostium of the auditory tube, which was difficult to access areas before nasal endoscopy.

The examination is well tolerated by older children and can be performed on smaller children if their heads are restrained and a topical anesthetic applied to the nasal cavity.^{1,2}

Topical anesthesia is a controversial subject for nasal endoscopy because it is difficult to confirm whether the sensation of from the endoscope is lesser than the sensation of being unable to swallow or breath that can arise from anesthesia of the nose and oropharynx. It is up to clinicians to decide according to their own experience.

Although this is a simple examination if performed by experienced hands, it should not be indicated routinely for children as it is for adults.

In children, local factors such as a narrow nasal cavity, edema of the mucosa, some types of anatomic variations such as displaced septum, hypertrophy of conchae, may make it difficult for the endoscope to pass. Additionally, other factors such as fear, discomfort due to the introduction of an object into the nostril and anxiety, principally in smaller children, can make these difficulties more evident.^{1,2}

This being so, endoscopy should be restricted to symptomatic conditions and be performed after any acute inflammation of the nasal mucosa has passed. Crying can increase nasal sensitivity, making examination difficult since most children do not tolerate aspiration of nasal secretions well.

Although recordings make it possible to review the images, the quality of what was recorded can make later analysis more difficult.^{3,4} We should remember that the endoscope image of is limited and when structures are filmed at great proximity they can appear extremely magnified. The three-dimensional nature of the structures should also be considered.

When pharyngeal tonsils or adenoids are being examined, their size in terms of the obstruction caused should take account of their relationship to the posterior extremity of the nasal septum and their lateral extension between the ostiae of the auditory tube.

This ability to observe in three dimensions and during deglutition and respiration, is the major difference between lateral x-ray and fiber optic examination.

Nasal fiber optic examination is also of extreme utility in cases of adenoid tissues that have grown in the direction of the choanae, causing significant nasal obstruction, but with no compatible causal findings on lateral x-ray.⁵

In cases were diagnosis remains doubtful after nasal fiber optic examination, a further examination under general anesthetic is of fundamental importance, in particular with smaller children (months to 3 years), for the differential diagnosis of congenital tumors, atresia or stenosis of choanae.

Thus, nasal fiber optic examination is not restricted to hospital environments, as the article by Santos et al., "Schoolchildren submitted to nasal fiber optic examination at school: findings and tolerance." made clear.⁶

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This examination should always be performed by a trained professional with a good knowledge of the anatomy of the region, in a suitable place, which could be a general clinic, school or business, with adequate conditions for care in the case of complications of whatever nature (bleeding, patient becoming ill, vomiting).

Although considered of low risk compared with endoscopy for thoracic or abdominal cavities, appropriate hygiene techniques should be employed to ensure adequate disinfections and reduce bacterial or fungal contamination of the scope.⁷

The idea behind this article of identifying the prevalence of adenoid hypertrophy in schoolchildren is interesting because there has not been any similar work done in our country. However, the age group investigated (6 to 13 years) is not the range during which there is the greatest frequency of adenoid hypertrophy.

The pharyngeal tonsil is visible in newborn infants and increases in size until it peaks at six or seven years, with peak development around 4-7 years and natural progressive regression until adolescence.⁸ This explains the high prevalence of degree I adenoid hypertrophy in the study.

The article does not make clear whether the only exclusion criteria were purulent secretions covering adenoids

and refusal to be examined. We should remember that adenoids can also be enlarged in cases associated with allergic rhinitis and viral conditions (frequent in children), which could alter their prevalence.

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