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Clinical role of respiratory virus infection in acute otitis media  
Arola M.; Ruuskanen O.; Ziegler T.; Mertsola J.; Nanto-Salonen K.; Putto-Laurila A.; Viljanen M.K.; Halonen P.  
PEDIATRICS (1990) 86/6 (848-855)  
The clinical characteristics of acute otitis media in relation to coexisting respiratory virus infection were studied in a 1-year prospective study of 363 children with acute otitis media. Respiratory viruses were detected using virus isolation and virus antigen detection in nasopharyngeal specimens of 42% of the patients at the time of diagnosis. Rhinovirus (24%) and respiratory syncytial virus (13%) were the two most common viruses detected. Adenovirus, parainfluenza viruses, and coronavirus OC43 were found less frequently. The mean duration of preceding symptoms was 5.9 days before the diagnosis of acute otitis media. Ninety-four percent of the children had symptoms of upper respiratory tract infection. Fever was reported in 55% and earache in 47% of cases. Patients with respiratory syncytial virus infection had fever, cough, and vomiting significantly more often than patients with rhinovirus infection or virus-negative patients. No significant differences were found in the appearance of the tympanic membrane and outcome of illness between virus-negative and virus-positive patients with acute otitis. Most patients respond well to antimicrobial therapy despite the coexisting viral infection. If the symptoms of infection persist, they can be due to the underlying viral infection, and viral diagnostics preferably with rapid methods may be clinically useful in these patients.

Congenital nasal masses: CT and MR imaging features in 16 cases  
Barkovich A.J.; Vandermarck P.; Edwards M.S.B.; Cogen P.H.  
AM. J. NEURORADIOL. (1991) 12/1 (105-116)  
The imaging studies of 16 children with pathologically proved nasal encephaloceles (eight), nasal dermal sinuses/nasal dermoids (seven), and nasal cerebral heterotopias, more commonly known as nasal gliomas (one), were retrospectively reviewed and compared with normal control subjects to define the normal anatomy and analyze deformities caused by these lesions. Nasal encephaloceles were always identified as complex masses of mixed soft tissue and CSF intensity that were contiguous with intracranial structures. The nasal glioma appeared as a mixed-intensity mass that, on the basis of the CT scan, appeared to be continuous with intracranial structures. Nasal dermal sinuses could only be identified as they coursed through the skin and subcutaneous soft tissue. They could not be identified when intraosseous. Moreover, on CT and, particularly, on MR, a number of potential diagnostic pitfalls were encountered. The most important of these was the normal fat deposition that occurs within bone during normal maturation and during aeration of the frontal sinuses and nasal bones. These fatty changes can easily be mistaken for fatty tumors if they are not recognized as normal anatomic changes. Interestingly, the classic plain film findings for congenital nasal masses were present only in the encephaloceles and nasal glioma; dermoids and dermal sinuses showed none of the classic plain film findings. In the six patients who had both CT and MR, the masses were easily identified and characterized by each imaging method. Congenital nasal masses are well characterized by both CT and MR. It is important to understand the normal changes in the anatomy of the nasofrontal region in the pediatric age group to avoid false-positive diagnoses in this region.

Human adenoidal organ culture: A model to study nontypable Haemophilus influenzae (NTHI) and other bacterial interactions with nasopharyngeal mucosa—implications in otitis media  
Bernstein J.M.; Hard R.; Cui Z.D.; Nobuo S.; Fisher J.; Ogra P.L.  
OTOLARYNGOL. HEAD NECK SURG. (1990) 103/5 1 (784-791)  
Nontypable Haemophilus influenzae (NTHI) has become the predominant cause of both acute supplicative otitis media and chronic otitis media with effusion. It has now been well-demonstrated that
both outer membrane proteins and restriction fragment analysis of the bacterial genomes of concomitant nasopharyngeal and middle ear effusion isolates of NTHI are identical. It is therefore of critical importance to understand the mechanisms whereby bacteria that are present in normal healthy children in small numbers become the predominant organism in the nasopharynx in otitis media. The studies presented here suggest that nontypable Haemophilus influenzae can effectively decrease ciliary function as measured by stroboscopic illumination of ciliary beat frequency on human adenoidal organ culture. This organism also produces significant histopathologic and ultrastructural damage to the epithelial cells and cilia of adenoid organ culture, demonstrated by both light microscopy and scanning electron microscopy. The data suggest the following hypothesis: nontypable Haemophilus influenzae can destroy mucociliary function and allow increased bacterial replication in the mucus overlying the nasopharyngeal mucosa. The mucociliary system of the eustachian tube may also be involved in a a similar manner, thus allowing bacteria to enter the middle ear space via the eustachian tube.

Catastrophic otologic injury from oral jet irrigation of the external auditory canal
Dinsdale R.C.; Roland P.S.; Manning S.C.; Meyerhoff W.L.
LARYNGOSCOPE (1991) 101/1 I (75–78)
Jet irrigation is an accepted method for removal of cerumen from the external auditory canal. Even at a submaximal power setting, oral jet irrigators can generate enough force to rupture the tympanic membrane. Parameters for safe use of these irrigators have never been established. Three cases are reported in which, in addition to tympanic membrane rupture, oral jet irrigators caused ossicular disruption, round and oval window fistulae, and subluxation of the stapedial footplate. A prospective study performed on 25 fresh cadavers demonstrated a 6% incidence of tympanic membrane perforation when the power setting was one-third full power or greater. Recommendations are made for safe use of oral jet irrigators for removal of external auditory canal cerumen.

Detection of human herpesvirus 6 DNA in throat swabs by polymerase chain reaction
Kido S.; Kondo K.; Kondo T.; Morishima T.; Takahasbi M.; Yamanishi K.
J. MED. VIROL. (1990) 32/3 (139–142)
The detection of human herpesvirus 6 (HHV-6) DNA was carried out in throat swabs of adults and children by the polymerase chain reaction, and isolation of virus was also attempted from peripheral mononuclear cells. Although virus was isolated only from peripheral blood mononuclear cells of infants with exanthem subitum, HHV-6 DNA was detected in one of 30 healthy adults (3%), two of nine adults (22%) with common cold, two of 10 infants (20%) with exanthem subitum, four of 39 febrile children (10%) with antibody to HHV-6 (including three of 10 infants aged under 1 year old, and one of 29 children aged over 1 year old). However, HHV-6 DNA was not detected in samples from healthy neonates.

Recurrence risks for near relatives of children with sensori-neural deafness
Koehn D.; Morgan K.; Fraser F.C.
GENET. COUNS. (1990) 1/2 (127–132)
In a sample of children with sensori-neural deafness and no evidence of a syndrome, ototoxic exposure, or autosomal dominant or X-linked family history, seen in the Division of Medical Genetics of The Montreal Children's Hospital, the probability of a sibling being similarly affected was about 1 in 6, both in French-Canadian families and the remainder of the sample. The frequency of deafness of early onset was measured in the uncles and aunts of probands, and these figures were used to derive approximate recurrence risks for the offspring of probands (about 1 in 130, ignoring the possibility of autosomal dominant mutation) and for the offspring of the probands' unaffected sibs (about 1 in 250). A rough estimate of the number of autosomal recessive loci contributing to sensori-neural deafness is derived as 13.

Coordination of breathing, sucking, and swallowing during bottle feedings in human infants
Koenig J.S.; Davies A.M.; Thach B.T.
J. APPL. PHYSIOL. (1990) 69/5 (1623–1629)
Incoordination of sucking, swallowing, and breathing might lead to the decreased ventilation that accompanies bottle feeding in infants, but the precise temporal relationship between these events has not been established. Therefore, we studied the coordination of sucks, swallows, and breaths in healthy