

Mucopurulent Nasal Discharge

Question:

From time to time, I come across children or adults, who have allergic rhinitis, presenting with thick, yellow or even greenish nasal discharge. Some of them respond well to antibiotics like clarithromycin or cefuroxime, but some don't. However, some non-responsive patients do become asymptomatic after a period of time even without antibiotics. My questions are:

1. Are there any clues which can guide us as to whether an antibiotic is needed?
2. Do you think clarithromycin and cefuroxime are the drugs of choice, or can one try amoxicillin or cefalexin first?
3. Is an antibiotic needed when para-nasal sinus x-ray shows maxillary mucosal thickening?

Comments:

In allergic rhinitis, the increased number of eosinophils, identified on a nasal smear, account for the discolorations of the nasal discharge, there may not be any bacterial infection. In the majority of patients, the symptoms gradually subside without antibiotic treatment. The commonest cause of acute rhinosinusitis is viral in origin and the inflammation caused by the virus produces increased secretion from the seromucinous glands. As viral infection alters the mucociliary function of the nasal lining, it facilitates the invasion of commensal bacteria responsible for the mucopurulent discharge. The common pathogens are *Streptococcus pneumoniae* and *Haemophilus influenzae*

followed by *Klebsiella* species. *Branhamella catarrhalis*, which may act as a primary pathogen or facilitate the pathogenicity of other organisms, and β -lactam-producing strains of bacteria, are not uncommon. When the infection becomes chronic, *Staphylococcus aureus* and anaerobes, the *Bacteroides* spp, are frequently seen.

The answers to the specific questions are:

1. It may be important, though quite difficult, to establish the organisms responsible for the mucopurulent infection. Antibiotic treatment is usually started when the symptom of nasal discharge persists and also when other symptoms and signs of sinusitis appear.
2. Initially, a broad spectrum antibiotic, such as amoxicillin or co-trimoxazole with nasal decongestant, should be given. If response is not satisfactory, then amoxicillin with clavulanate, or cefuroxime or metronidazole may be prescribed.
3. Mucosal thickening identified by x-ray of the para-nasal sinus may only indicate the reaction of the mucosa to repeated episodes of infection. There may not be an element of infection with just thickening of the mucosa. The whole clinical picture should be taken into account in the treatment of the patient.

The comments have been prepared by :

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