Common cold and allergic rhinitis

- Sneezing, runny nose, and headache, were the main complaint of a man , his past medical history is negative, he does not take any medicine and he is not alcoholic, the best for him is (are)
- Flue-out tab.
- Phenylephrine +paracetamol.
- Diphenhydramine alone.
- Loratidine +phenylephrine.
- All of the above.

- You refused to give ampiclox vials to a father who describes the clinical picture of his child as follow: fever, rhinorrhea, sneezing, nasal congestion.

All of the followings are causes of your rejection EXCEPT:

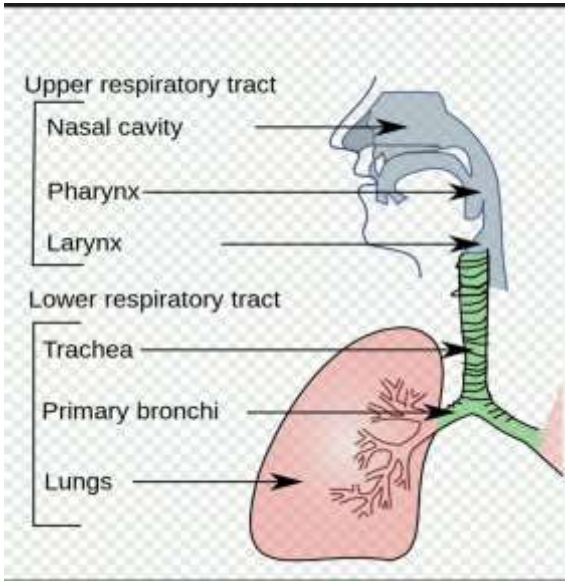
- It is not an OTC drug.
- The condition is caused by rota virus.
- It rarely complicate to bacterial infection.
- Use of ampiclox increases resistance to drugs.
- The condition is self limiting.

- A mother asks for something to prevent allergic rhinitis of her 5 years old child before symptoms starts, your choice will be:
- Subcutaneous injection with child specific allergen.
- Beclomethasone nasal spray.
- Diphenhydramine syrup.
- Cromolyn sodium nasal solution.
- All are correct.

Definition

C.c is a self limiting viral infection. of upper respiratory tract.

C.c is usually self limiting but the bothersome symptoms make patients self medicate themselves.



Pathophysiology of c.c

- 200 virus can cause c.c but the majority of cases are caused by rhinovirus

Others: adenovirus, echovirus, respiratory syncytial virus.

Viral and bacterial co-inf. is rare.

Infected cells will enhance inflammatory process which result in vasodilatation, glandular secretion, sneez and cough reflexes

viral inf. ends once enough neutralizing antibodies leaks into mucosa to end viral replication.

Clinical picture

cl.p appears 1-3 days after inf.
1st symptom sore throat
2nd nasal symptom
3rd cough (infrequent) 20%
low grade fever

Complication

These are rare:
sinusitis
otitis media
bronchitis
bacterial pneumonia
exacerbation of asthma and COPD

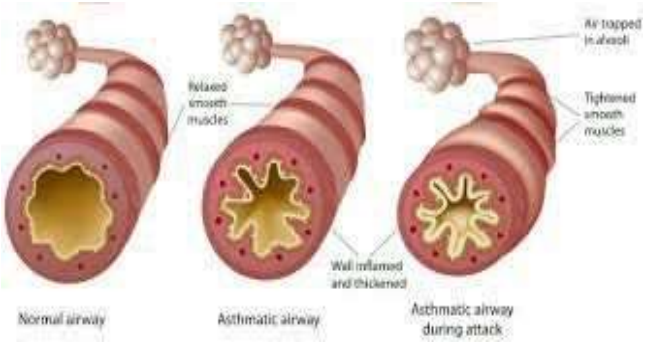
Differentiation between c.c & other respiratory disorders

Influenza: Myalgia, arthralgia, fever, fatigue.

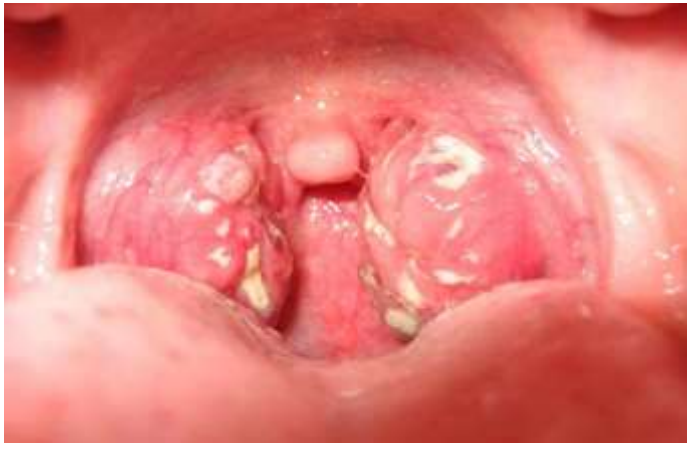
Allergic rhinitis: watery eyes, watery rhinorrhea, itchy nose & eyes, sneezing,

Differentiation between c.c & other respiratory disorders

Asthma: dyspnea, wheezing, cough.

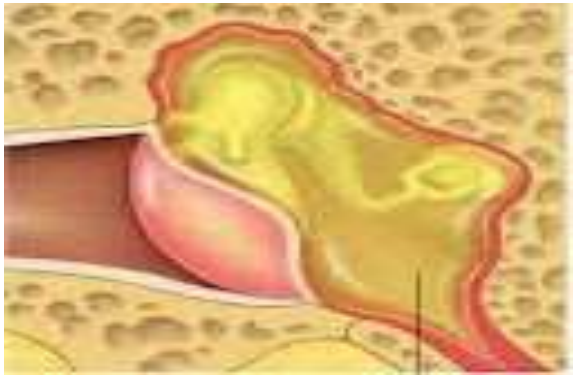


Bacterial throat inf.: sore throat ,exudate, and tender cervical adenopathy.

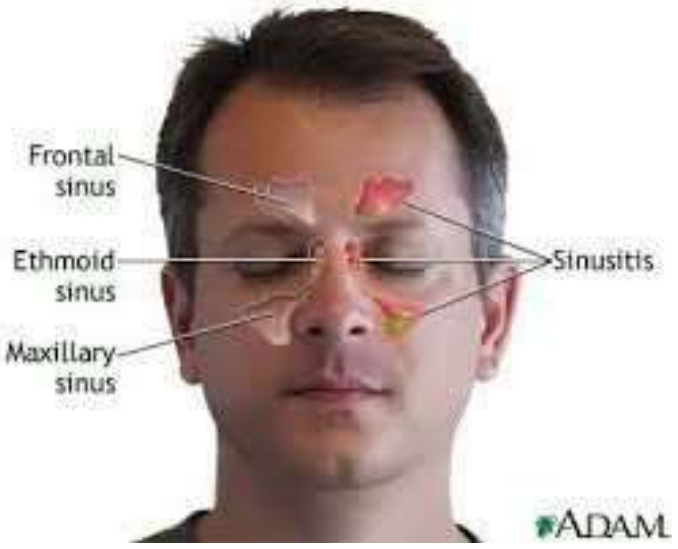


Differentiation between c.c & other respiratory disorders

Otitis media:ear fullness, dizziness, hearing loss, otalgia,



Sinusitis: headache upon bending, fever, and heavy nasal secretion.



Treatment

Treatment depends on symptoms complained by the patient

Nonpharmacological treatment:

a. Humidifiers.
b. Vaporizer.
c. Saline nasal spray or drops:sooth mucosa and loosen encrsted mucus.

Pharmacological treatment

Decongestants
Antihistamines
Systemic analgesics
Antitussives and protussives

Decongestants

Sympathomimetics:constrict bd vessels, by stimulating alfa adrenergic receptors.
Direct sympathomimetis bind directly to receptors (phenylephrin, oxymetazoline).
Indirect: displace norepinephrine from storage vesicle (ephedrin), have slowest onset & longer duration of actin than the direct.
pseudoephedrine have both direct & indirect activity.

Topical Sympathomimetic
Systemic Sympathomimetic

Topical Sympathomimetic

Rhinitis medicaments is the main S.E of topical sympathomimetic which can be treated by slowly withdrawing the topical decongestant a replacing it with topical normal saline or topical Corticosteroid or systemic decongestant.

Systemic Sympathomimetic

These drugs will stimulate the CNS & the heart
CNS stimulation is more pronounced with ephedrine than the others.

A study done in USA showed that phenylpropanolamine inc. risk of hemorrhagic stroke in women who take it in appetite suppressant products which are not available in U. K.

It is imp. to know that the differences bt US a Uk in the way phenylpropanolamine used as an OTC medicine.

Maximum daily dose in Uk is 100mg.

in USA 150mg.

Purchacing large quantities of pseudoephedrine may be used illegally to produce methamphetamine THO limits to be placed on sales of these products.

Drug interactions

MAOI (phenelzin) → increase BP
Methyldopa → increase BP
TCAD (amitriptyline) increase BP (if we use direct acting), decrease decongestant activity (indirect acting decongestant).

Antihistamines

They reduce symptoms of cold (rhinorrhea and sneezing) by their anti cholinergic effect the sedating antihistamine have more such effect than the non sedating.

Systemic analgesic

For aches and fever associated with cold. Aspirin containing products should not be used in pat. with viral illness because of risk of Rey's syndrome.

Seasonal Allergic Rhinitis(hay fever)

is a systemic dis. with nasal symptom affecting 20%of adult and 40% of children in USA

IgE increase in children <6y.

allergic rhinitis is caused by indoor a outdoor allergiens.

Classification:

Intermittent allergic rhinitis.

Persistent allergic rhinitis.

Allergic rhinitis	Common cold
Ocular symptoms present	Usually **no ocular** symptoms
Symptoms continue for as long as the patient is exposed to the allergens , **often for several weeks**	Symptoms last for about **four to several days**
Symptoms occur at **the same time Each year,** in spring or summer when the pollen that cause allergy is being produced.	Can occur at any time of the year but more usually in the **winter months**
Only affect **isolated individuals**.	**Highly contagious**, therefore other family members may well be suffering at the same time and the infection will be quite common within the community.

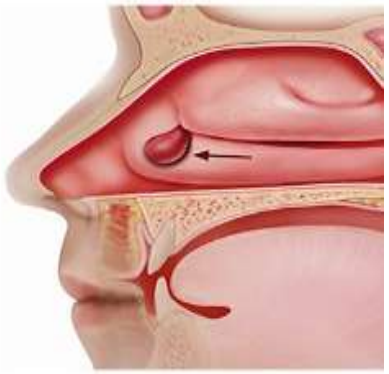
Complications

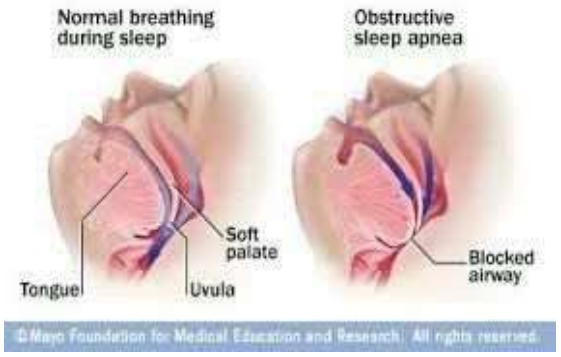
Sinusitis, otitis media

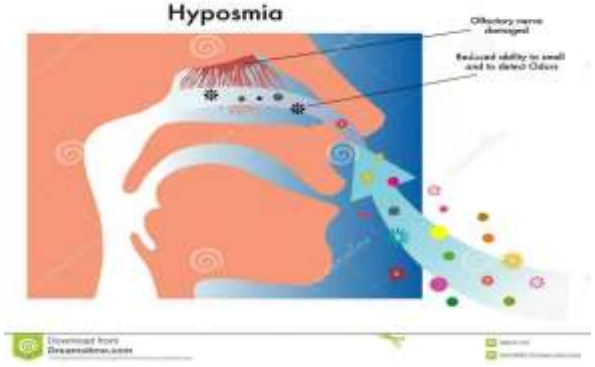
Chronic complications

nasal polyps, sleep apnea, hyposmia (Dec. Sense of smell).

Allergic rhinitis and asthma share a common pathology and can be implicated in the development of asthma.







Treatment

Allergic rhinitis cannot be cured, so the goal is to reduce the symptoms by:

A. Allergin avoidance.

B. Pharmacotherapy.

C. Immunotherapy.

Pharmacotherapy

a.Antihistamines.

b.Decongestant.

c.Topical corticosteroids.

d.Mast cell stabilizers.

Antihistamines and mast cell stabilizers are used regularly.

Antihistamines

in addition to CNS depressive effect, sedating antihistamines also have CNS stimulatory effect include anxiety, hallucination,appetite stimulation, muscle dyskinesia &activation of epileptogenic foci.

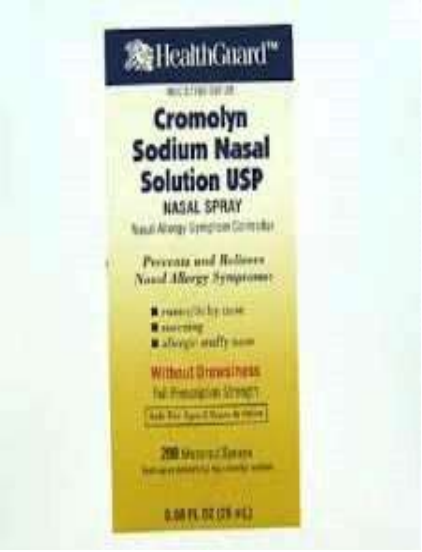
children are sensitive to the excitatory effects whereas adults are sensitive to the CNS depressive effect.

Corticosteroids

Steroid nasal sprays: Beclometasone, fluticasone, and triamcinolone:

A steroid nasal spray is the treatment of choice **for moderate to severe nasal symptoms** and superior to oral antihistamine.

Mast cell stabilizers



Cromolyn sod.
is a prophylactic agent, It prevents mediator release.
Treatment is more effective if started before symptoms begin.
onset 3-7-days
for pregnant women with allergic rhinitis intranasal cromolyn sod is considered 1st line option.
It is preferably started 1 week before the hay fever season is likely to begin and then used continuously whilst exposed to allergens .

Immunotherapy

S. C. inj. with pat. Specific allergen
is indicated for refractory allergic
rhinitis with moderate to severe symptom,
weekly inj to reach maintenance cone.
Within 4-8 months then monthly for 3-5years.

- Home work:

What do you know about

Reye's (Ryes) syndrome


ThaNK
YOU