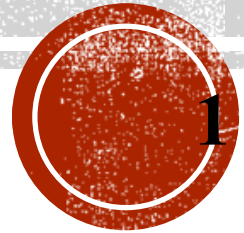
# Management of Patients With Upper Respiratory Tract Disorders

By: Dr. Suhair Al-Ghabeesh

Revised by: Dr. Maha Subih




# UPPER AIRWAY INFECTIONS

- Upper airway infections are common conditions that affect most people.
- Some infections are acute, with symptoms that last several days; others are chronic, with symptoms that last a long time or return.
- Patients with these conditions seldom require hospitalization.

# RHINITIS

- Rhinitis is a group of disorders characterized by inflammation and irritation of the mucous membranes of the nose.
- It may be classified as nonallergic or allergic
- Rhinitis may be an acute or chronic condition.

## Clinical Manifestations

- rhinorrhea (excessive nasal drainage, runny nose), nasal congestion, nasal discharge, nasal itchiness, and sneezing.
- Headache may occur, particularly if sinusitis is also present.

# MEDICAL MANAGEMENT

- The management of rhinitis depends on the cause.
- If viral rhinitis is the cause, medications are given to relieve the symptoms.
- In allergic rhinitis, tests performed to identify possible allergens.
- Immunizations and corticosteroids may be required.
- If a bacterial infection, antimicrobial agent will be used.

Pharmacologic therapy:

- Antihistamines: for sneezing, itching, & rhinorrhea.
- Oral decongestant agents: for nasal obstruction. In addition, intranasal corticosteroids may be used for severe congestion, and ophthalmic agents: to relieve irritation, itching, & redness of the eyes.

# NURSING MANAGEMENT

- The nurse instructs the patient with allergic rhinitis to avoid or reduce exposure to allergens and irritants, such as dusts, molds, animals, fumes, odors, powders, sprays, and tobacco smoke.
- Saline nasal or aerosol sprays may be helpful in soothing mucous membranes, softening crusted secretions, and removing irritants.
- blow the nose before applying any medication into the nasal cavity.

# VIRAL RHINITIS (COMMON COLD)

- Specifically, the term "cold" refers to an a febrile, infectious, acute inflammation of the mucous membranes of the nasal cavity.
- It can also be used when the causative virus is influenza ("the flu").
- Colds are highly infectious because virus is shed for about 2 days before the symptoms appear and during the first part of the symptomatic phase infectious.
- The common cold is the most common cause of absenteeism from work and school
- Immunity after recovery is variable and depends on many factors, including a person's natural host resistance and the specific virus that caused the cold.

# VIRAL RHINITIS (COMMON COLD)

**Clinical Manifestations**

- nasal congestion, runny nose, sneezing, nasal discharge, nasal itchiness, tearing watery eyes, “scratchy” or sore throat, general malaise, low-grade fever, chills, and often headache and muscle aches.
- As the illness progresses, cough usually appears.
- In some people, viral rhinitis make worsens the **herpes simplex, commonly called a cold sore.**
- The symptoms last from 1 to 2 weeks. If there is significant fever or more severe systemic respiratory symptoms, it is no longer viral rhinitis but one of the other acute upper respiratory tract infections.

# MEDICAL MANAGEMENT

- There is no specific treatment for the common cold or influenza.
- Management consists of symptomatic therapy, providing adequate fluid intake, encouraging rest, preventing chilling, increasing intake of vitamin C, and using expectorants.
- Warm salt-water gargles soothe the sore throat and nonsteroidal anti-inflammatory agents (NSAIDs) such as aspirin or ibuprofen relieve the aches, pains, and fever in adults.
- Antihistamines to relieve sneezing, rhinorrhea, and nasal congestion.
- Antimicrobial agents (antibiotics) should not be used because they do not affect the virus or reduce the incidence of bacterial complications.

# NURSING MANAGEMENT

- It is important to teach the patient how to break the chain of infection. Hand washing remains the most effective measure to prevent transmission of organisms.

- The nurse teaches methods to treat symptoms of the common cold and preventive measures.

# ACUTE SINUSITIS

- The sinuses, mucus-lined cavities filled with air that drain normally into the nose, are involved in a high proportion of URTI
- If their openings into the nasal passages are clear, the infections resolve promptly. However, if their drainage is obstructed by a deviated septum or by hypertrophied turbinates, spurs, or nasal polyps or tumors, sinus infection may persist as a secondary infection .
- Some individuals are more prone to sinusitis because of their occupations. For example, continuous exposure to environmental hazards such as paint, sawdustنشارة الخشب, and chemicals may result in chronic inflammation of the nasal passages.

# CLINICAL MANIFESTATIONS

- facial pain or pressure over the affected sinus area, nasal obstruction, fatigue, purulent nasal discharge, fever, headache, ear pain and fullness, dental pain, cough, a decreased sense of smell, sore throat, eyelid edema, or facial congestion or fullness.
- Acute sinusitis can be difficult to differentiate from an URTI or allergic rhinitis.

**Complications**

- Acute sinusitis, if left untreated, may lead to severe an occasionally life-threatening complications such as meningitis, brain abscess, ischemic infarction, and osteomyelitis.

# MEDICAL MANAGEMENT

- The goals are to treat the infection, shrink nasal mucosa, & relieve pain.
- The antimicrobial agents of choice for a bacterial infection vary in clinical practice. First-line antibiotics include amoxicillin (Amoxil), trimethoprim/sulfamethoxazole (Bactrim, Septra), & erythromycin.
- Second-line antibiotics include cephalosporins such as cefuroxime axetil (Ceftin), cefpodoxime (Vantin), and cefprozil (Cefzil) & amoxicillin clavulanate (Augmentin).
- Newer & more expensive antibiotics with a macrolides azithromycin (Zithromax), and clarithromycin.

# MEDICAL MANAGEMENT

- Use of oral and topical decongestant agents may decrease mucosal swelling of nasal polyps, thereby improving drainage of the sinuses.
- Heated steam and saline irrigation also may be effective for opening blocked passages
- Antihistamines such as diphenhydramine (Benadryl), cetirizine (Zyrtec), and fexofenadine (Allegra) may be used if an allergic component is suspected.
- If the patient continues to have symptoms after 7 to 10 days, the sinuses may need to be irrigated and hospitalization may be required.

# NURSING MANAGEMENT

- The nurse instructs the patient about methods to promote drainage such as inhaling steam (steam bath, hot shower, and facial sauna), increasing fluid intake, and applying local heat (hot wet packs).
- informs the patient about the side effects of nasal sprays & about rebound congestion
- The nurse stresses the importance of following the recommended antibiotic regimen, because a consistent blood level of the medication is critical to treat the infection.
- Teaches the patient the early signs of a sinus infection and recommends preventive measures such as following healthy practices and avoiding contact with people who have URTI.

# CHRONIC SINUSITIS

is an inflammation of the sinuses that persists for more than 3 weeks in an adult and 2 weeks in a child.

**Clinical Manifestations**

- Impaired mucociliary clearance and ventilation, cough (because the thick discharge constantly drips backward into the nasopharynx), chronic hoarseness, chronic headaches in the periorbital area, and facial pain. These symptoms are generally most pronounced on awakening in the morning. Fatigue and nasal stuffiness are also common.
- a decrease in smell and taste and a fullness in the ears.

# CHRONIC SINUSITIS

- Complications of chronic sinusitis, although uncommon, include severe orbital cellulitis, subperiosteal abscess, cavernous sinus thrombosis, meningitis, encephalitis, and ischemic infarction.

**Medical Management**

- The antimicrobial agents of choice include amoxicillin clavulanate (Augmentin) or ampicillin (Ampicin). Clarithromycin (Biaxin) and third-generation cephalosporins such as cefuroxime axetil (Ceftin), cefpodoxime (Vantin), and cefprozil (Cefzil) have also been effective. Levofloxacin (Levaquin), a quinolone, may also be used.
- The course of treatment may be 3 to 4 weeks. Decongestant agents, antihistamines, saline sprays, and heated steam may also provide some symptom relief.

# CHRONIC SINUSITIS

Surgical management

- When standard medical therapy fails, surgery, usually endoscopic, may be indicated to correct structural deformities that obstruct the ostia (openings) of the sinus.
- Excising and cauterizing nasal polyps, correcting a deviated septum, incising and draining the sinuses, aerating the sinuses, and removing tumors are some of the specific procedures performed.
- Oral and topical corticosteroids are usually prescribed.
- Antimicrobial agents are administered before and after surgery. Some patients with severe chronic sinusitis obtain relief only by moving to a dry climate.

# NURSING MANAGEMENT

- The nurse teaches the patient how to promote sinus drainage by increasing the environmental humidity (steam bath, hot shower, and facial sauna), increasing fluid intake, and applying local heat (hot wet packs).
- The nurse also instructs the patient about the importance of following the medication regimen.

# ACUTE PHARYNGITIS

- Acute **pharyngitis is an inflammation or infection in the throat,** usually causing symptoms of a sore throat.

## Clinical Manifestations

- a fiery-red pharyngeal membrane and tonsils, lymphoid follicles that are swollen and flecked with white-purple exudate, and enlarged and tender cervical lymph nodes and no cough. Fever, malaise, and sore throat also may be present.

## Medical Management

- Viral pharyngitis is treated with supportive measures since antibiotics will have no effect on the organism.
- Bacterial pharyngitis is treated with a variety of antimicrobial agents.

# MEDICAL MANAGEMENT

Pharmacologic therapy

- If a bacterial cause is suggested or demonstrated, penicillin is usually the treatment of choice.
- For patients who are allergic to penicillin or have organisms that are resistant to erythromycin, cephalosporins & macrolides (clarithromycin and azithromycin) may be used.
- Antibiotics are administered for at least 10 days to eradicate the infection from the oropharynx.
- Severe sore throats can also be relieved by analgesic medications, at 3- to 6-hour intervals; acetaminophen with codeine can be taken 3-4 times daily.
- Antitussive medication, in the form of codeine, dextromethorphan may be required to control the persistent and painful cough that often accompanies acute pharyngitis.

# MEDICAL MANAGEMENT

Nutritional therapy

- A liquid or soft diet is provided during the acute stage of the disease, depending on the patient's appetite and the degree of discomfort that occurs with swallowing.
- Occasionally, the throat is so sore that liquids cannot be taken in adequate amounts by mouth.
- In severe situations, fluids are administered intravenously. Otherwise, the patient is encouraged to drink as much fluid as possible (at least 2 to 3 L per day).

# NURSING MANAGEMENT

- The nurse instructs the patient to stay in bed during the febrile stage of illness and to rest frequently once up and about.
- Used tissues should be disposed of properly to prevent the spread of infection.
- It is important to examine the skin once for possible rash, because acute pharyngitis may precede some other communicable diseases (ie, rubella).
- Warm saline gargles or irrigations are used depending on the severity of the lesion and the degree of congestion.
- The nurse instructs the patient to resume activity gradually.

# NURSING MANAGEMENT

- A full course of antibiotic therapy is indicated in patients with group A beta-hemolytic streptococcal infection in view of the possible development of complications such as nephritis and rheumatic fever, which may have their onset 2 or 3 weeks after the pharyngitis has subsided.

# CHRONIC PHARYNGITIS

- Chronic pharyngitis is a persistent inflammation of the pharynx.
- It is common in adults who work or live in dusty surroundings, use their voice to excess, suffer from chronic cough, and habitually use alcohol and tobacco.

# CHRONIC PHARYNGITIS

## Clinical Manifestations

- Patients with chronic pharyngitis complain of a constant sense of irritation or fullness in the throat, mucus that collects in the throat and can be expelled by coughing, and difficulty swallowing.

## Medical Management

- based on relieving symptoms, avoiding exposure to irritants, and correcting any upper respiratory, pulmonary, or cardiac condition that might be responsible for a chronic cough.
- Nasal sprays or medications containing ephedrine sulfate for Nasal congestion
- Aspirin or acetaminophen is recommended for its anti-inflammatory and analgesic properties.

# NURSING MANAGEMENT

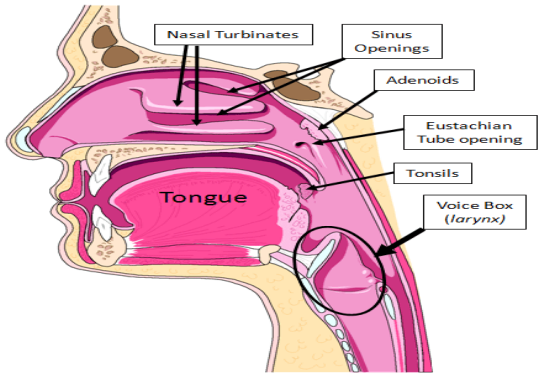
- To prevent the infection from spreading, the nurse instructs the patient to avoid contact with others until the fever subsides.
- Alcohol, tobacco, second-hand smoke, and exposure to cold are avoided, as are environmental or occupational pollutants if possible.
- The patient may minimize exposure to pollutants by wearing a disposable facemask.
- The nurse encourages the patient to drink plenty of fluids. Gargling with warm saline solutions may relieve throat discomfort.

# TONSILLITIS AND ADENOIDITIS

- The adenoids or pharyngeal tonsils consist of lymphatic tissue near the center of the posterior wall of the nasopharynx.
- Infection of the adenoids frequently accompanies acute tonsillitis.
- Group A beta-streptococcus is the most common organism associated with tonsillitis and adenoiditis.

## Clinical Manifestations

- sore throat, fever, snoring, & difficulty swallowing. Enlarged adenoids may cause mouth breathing, earache, draining ears, frequent head colds, bronchitis, foul-smelling breath, voice impairment, and noisy respiration.



# CLINICAL MANIFESTATIONS

- Unusually enlarged adenoids fill the space behind the posterior nares, making it difficult for the air to travel from the nose to the throat and resulting in a nasal obstruction.
- Infection can extend to the middle ears by way of the auditory (eustachian) tubes and may result in acute otitis media, which can lead to spontaneous rupture of the eardrums and further extension of the infection into the mastoid cells, causing acute mastoiditis. The infection also may reside in the middle ear as a chronic, low-grade, burning process that eventually may cause permanent deafness.

# MEDICAL MANAGEMENT

- Tonsillectomy is usually performed for recurrent tonsillitis when medical treatment is unsuccessful and there is severe hypertrophy, asymmetry, or peritonsillar abscess that occludes the pharynx, making swallowing difficult and endangering the airway (particularly during sleep).
- Tonsillectomy or adenoidectomy is indicated only if the patient has had any of the following problems:
- repeated bouts of tonsillitis;
- hypertrophy of the tonsils and adenoids that could cause obstruction and obstructive sleep apnea;

# MEDICAL MANAGEMENT

- repeated attacks of purulent otitis media;
- suspected hearing loss due to serous otitis media that has occurred in association with enlarged tonsils.
- antibiotic is initiated for patients undergoing tonsillectomy or adenoidectomy.
- The most common antimicrobial agent is oral penicillin, which is taken for 7 days.
- Amoxicillin and erythromycin are alternatives.

# NURSING MANAGEMENT

- Continuous nursing observation for hemorrhage in the immediate postoperative period,
- the most comfortable position is prone with the head turned to the side to allow drainage from the mouth and pharynx.
- The nurse must not remove the oral airway until the patient's gag and swallowing reflexes have returned.
- The nurse applies an ice collar to the neck, and a basin and tissues are provided for the expectoration of blood and mucus.
- If the pulse rate & temperature rise & the patient is restless, the nurse notifies the surgeon immediately.
- Milk & milk products (ice cream & yogurt) may be restricted because they may make removal of mucus more difficult.

# LARYNGITIS

- **Laryngitis, an inflammation of the larynx, often occurs as a result** of voice abuse or exposure to dust, chemicals, smoke, and other pollutants, or as part of an URTI.
- The cause of infection is almost always a virus.
- Bacterial invasion may be secondary. Laryngitis is usually associated with allergic rhinitis or pharyngitis.
- The onset of infection may be associated with exposure to sudden temperature changes, dietary deficiencies, malnutrition, and an immunosuppressed state.
- Laryngitis is common in the winter and is easily transmitted.

# CLINICAL MANIFESTATIONS

- hoarseness or **aphonia (complete** loss of voice) and severe cough. Chronic laryngitis is marked by persistent hoarseness. Laryngitis may be a complication of URTI.

## Medical Management

- Management of acute laryngitis includes resting the voice, avoid smoking, resting, & inhaling cool steam or an aerosol.
- If the laryngitis is part of a more extensive respiratory infection due to a bacterial organism or if it is severe, appropriate antibacterial therapy is instituted.

# LARYNGITIS

**Nursing Management**

- The nurse instructs the patient to rest the voice and to maintain a well-humidified environment.
- If laryngeal secretions are present during acute episodes, expectorant agents are suggested, along with a daily fluid intake of 3 L to thin secretions.

The End