

On-Demand Clinical News

The Management of Upper Respiratory Tract Infections in the Hospice Patient

By Shaun Gutstein, PharmD

Background

At least 80 million antibiotic prescriptions each year are unnecessary, which makes improving the prescribing and use of antibiotics a national priority. Any time antibiotics are used, they can cause side effects and lead to antibiotic resistance. “Be Antibiotics Aware”, a Centers for Disease Control and Prevention campaign, is a national effort to help fight antibiotic resistance and improve antibiotic prescribing and use. Upper respiratory tract infections have become a major area of focus since they are most commonly of viral etiology and often incorrectly treated with antibiotics. It is a common misconception that upper respiratory tract infections involve the lungs, but they do not – lung infections (pneumonia) are *lower* respiratory tract infections. Upper respiratory tract infections (URTIs) are infections of the mouth, nose, throat, larynx (voice box), or trachea (windpipe) and can be of viral, bacterial, fungal, and parasitic etiology.

Antibiotic Use in Hospice

Two primary questions should be asked when considering the use of antimicrobials in the hospice patient: Is receiving antimicrobials a goal of care for the patient? And, does the patient have signs and symptoms of an infection? While the patient is now on hospice, the pathogens don’t change. Patients on hospice are often colonized or infected with more resistant bacteria because the majority of hospice patients have had significant exposure to antibiotics over the course of their lives. If the decision to treat is made, then we need to follow appropriate recommendations, while considering each unique patient and their symptom presentation.

- Factors that may influence a decision **NOT** to treat:
 - Patient is unable to swallow
 - Severe infection and aggressive treatment is not a goal of care (e.g. when IV antibiotics are the only option, but not hospice appropriate)
 - Expected prognosis < duration of antimicrobial course
 - Patient/ family goal is purely palliative (e.g. morphine, antipyretics)
 - Adverse outcomes of drug administration
 - Risk of being colonized/infected by multi-drug resistant organisms (MDRO)
 - Prolonged survival may result in prolonged suffering

Nasopharyngitis (Common Cold)

Nasopharyngitis is inflammation of the pharynx and nasal cavities. The common cold is the most frequent acute illness in the United States, with highest prevalence in colder weather. Infectious nasopharyngitis is caused by over 200 different viral subtypes; however rhinoviruses and coronaviruses are the most common. The primary symptoms include nasal congestion or obstruction (80-100%), sneezing (50-70%), and sore or scratchy throat (50%). Nasal discharge may be clear or purulent. Colored nasal discharge does not necessarily implicate bacterial infection; this is a normal self-limited phase of the uncomplicated common cold, and does not indicate the need for antibiotics. Patients and caregivers should be reassured and educated about appropriate hand hygiene, signs of systemic infection, and to elevate the head of the bed to allow nasal passages to drain.

Symptomatic or supportive therapies are the mainstay of treatment, as most cases are self-limited:

- Nasal congestion/ obstruction:
 - Congestion and obstruction: Intranasal, cromolyn, or ipratropium
 - Clearing mucus obstruction: guaifenesin
 - Decongestants: Oral (phenylephrine, pseudoephedrine) - systemic side effects; Topical (intranasal) (phenylephrine, oxymetazoline) - limit to ≤ 3 days to avoid rebound congestion

Continued on Page 2



- Cough:
 - Suppressant: Dextromethorphan, benzonatate (no not crush/chew), codeine, cough drops
 - Expectorant/Thinning/Decongestion: guaifenesin, normal saline nebs
- Headache/ malaise/ fever: Acetaminophen or nonsteroidal anti-inflammatory drugs (NSAIDs)

Acute Rhinosinusitis (ARS)

Acute rhinosinusitis involves inflammation in the nasal cavity and paranasal sinuses. ARS is defined as symptoms occurring for less than 4 weeks. Acute rhinosinusitis can be of viral (AVRS) or bacterial (ABRS) etiology; however only 2-10% of cases are bacterial. About 38% of bacterial isolates are *Streptococcus pneumoniae*, but more resistant gram-negative bacteria, such as *Haemophilus influenzae* and *Moraxella catarrhalis*, are on the rise.

To diagnose ARS there must be presence of at least 2 major OR 1 major and ≥ 2 minor symptoms:

- Major symptoms: purulent or discolored nasal discharge, nasal congestion/ obstruction, facial congestion or fullness, facial pain or pressure, hyposmia or anosmia, fever
- Minor symptoms: headache, ear pain/ pressure, bad breath, dental pain, cough, fever, fatigue

Then, one of the following criteria must be met for the diagnosis of acute *bacterial* rhinosinusitis:

- I. Onset with *persistent* symptoms or signs compatible with ARS, lasting for ≥ 10 days
- II. Onset with *severe* symptoms or signs of high fever [$>102^{\circ}\text{F}$ (39°C)] and purulent nasal discharge or facial pain lasting for $\geq 3-4$ consecutive days at the beginning of illness
- III. Onset with *worsening* symptoms or signs characterized by the new onset of fever, headache, or increase in nasal discharge following a typical viral URI that lasted 5-6 days that had initially improved

Symptomatic treatments are similar to those for the common cold. Intranasal corticosteroids (e.g. fluticasone) may also be used if the patient has a history of allergic rhinitis. Warm facial packs, eliminating environmental triggers, adequate rest with head of the bed elevated are also essential. Initiate empiric antibiotic treatment as soon as the diagnosis of ABRS is made. Amoxicillin-clavulanate is the first-line antibiotic choice. Doxycycline, levofloxacin, or moxifloxacin may be used for patients with true penicillin allergies, though note that moxifloxacin is costly. If there is a concern for resistance (age > 65 yo, antibiotics within the last 3 months, recent hospitalization, immunocompromised), initiate high-dose amoxicillin-clavulanate (4 grams/day), levofloxacin, or moxifloxacin.

Acute Pharyngitis

Acute pharyngitis is inflammation of the pharynx. Peak season is late winter and early spring. Viruses, similar to the common cold and AVRS, account for 25-45% of cases, while bacteria are attributed to 5-15% of cases. Infections caused by Group A (beta-hemolytic) *Streptococcus* (GAS), such as *Streptococcus pyogenes*, result in “strep throat.” Some other potential causes of “strep throat” may be chronic reflux, rhinitis, persistent cough, and allergens. Throat swab and testing by rapid antigen detection test (RADT) is recommended for diagnosis. Clinical features alone do not reliably discriminate between bacterial or viral pathogens, except when overt viral features (rhinorrhea, conjunctivitis, cough, oral ulcers, and/or hoarseness) are present. Symptomatic/ supportive therapies, similar to the common cold and ARS, are the mainstays of viral acute pharyngitis. NSAIDs are preferred for reducing throat inflammation, but oral corticosteroids may be used when NSAIDs are contraindicated. Topical anesthetics, such as viscous lidocaine and benzocaine lozenges, are also useful, but should be avoided if there is a risk for aspiration.

A humidifier may also be used to moisten the airways when the air is cold or dry. Penicillin is the drug of choice for GAS strep throat. Penicillin V potassium is an oral option, while penicillin G benzathine may be given as a one-time intramuscular dose. If the patient has a penicillin allergy, cephalexin, clindamycin, azithromycin, or clarithromycin may be used; however, clindamycin is the preferred second-line agent.

For guidance and recommendations for your patients with URTIs, contact a ProCare HospiceCare clinical pharmacist, available 24/7/365, for consultation.

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**Gratitude can transform common days
into thanksgiving, turn routine jobs
into joy, and change ordinary
Opportunities in blessings**

~ William Arthur Ward



Upcoming Lunch and Learn Presentations

November: Bowel Management in Hospice and Palliative Care

Presenter: Jennifer Procaccino, PharmD

Dates: Tuesday, November 6, 2018 at 3:00PM ET; Wednesday, November 7, 2018 at 12:00PM ET

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A Review on Marijuana Use in Hospice and Palliative Care

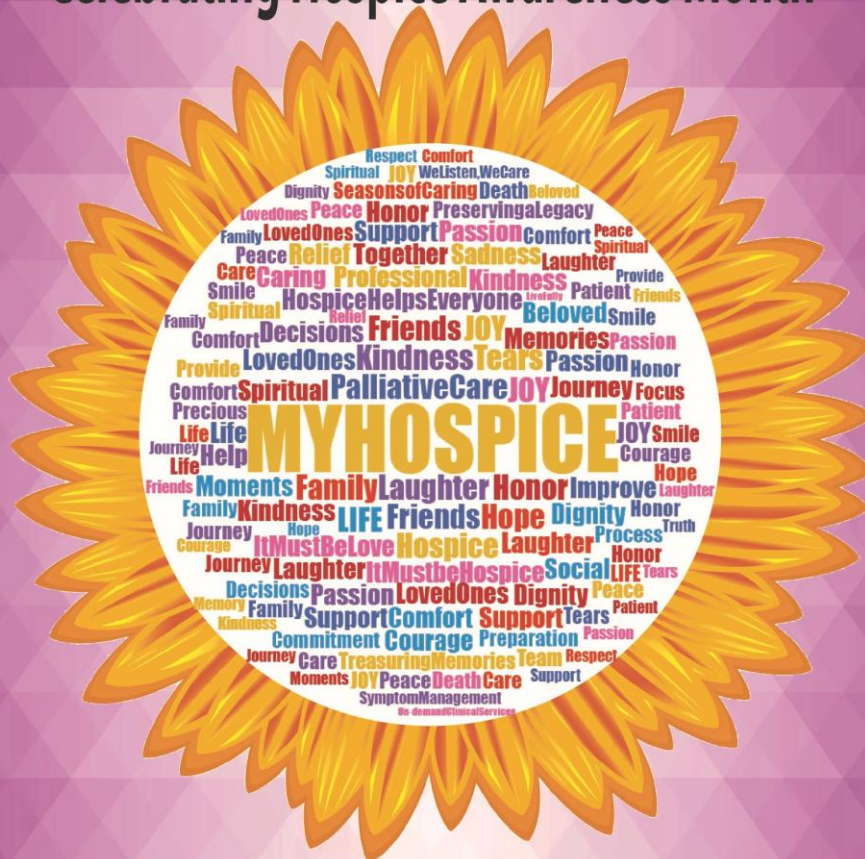
Presenter: TBA

Dates: Tuesday, December 11, 2018 at 3:00PM ET; Wednesday, December 12, 2018 at 12:00PM ET

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and you matter to the end of your life.**

~Dame Cicely Saunders

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