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DHA TELEHEALTH CLINICAL GUIDELINES

FOR VIRTUAL MANAGEMENT OF ACUTE

PHARYNGITIS/TONSILLITIS (SORE

THROAT) - 29

Issue date: 27/07/2021

Effective date: 27/07/2021

Health Policies and Standards Department
Health Regulation Sector (2021)

INTRODUCTION

Dubai Health Authority (DHA) is the responsible entity for regulating, licensing and monitoring health facilities and healthcare professionals in the Emirate of Dubai. The Health Regulation Sector (HRS) is an integral part of DHA and was founded to fulfil the following overarching strategic objectives:

Objective #1: Regulate the Health Sector and assure appropriate controls are in place for safe, effective and high-quality care.

Objective #2: Position Dubai as a global medical destination by introducing a value-based, comprehensive, integrated and high-quality service delivery system.

Objective #3: Direct resources to ensure happy, healthy and safe environment for Dubai population.

ACKNOWLEDGMENT

This document was developed for the Virtual Management of Sore Throat in collaboration with Subject Matter Experts. The Health Policy and Standards Department would like to acknowledge and thank these professionals for their dedication toward improving the quality and safety of healthcare services.

The Health Regulation Sector

Dubai Health Authority

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EXECUTIVE SUMMARY

Telehealth is based on Evidence Based Practice (EBP) which is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient.

It means integrating individual clinical expertise with the best available external clinical evidence and guidelines from systematic research.

EBP is important because it aims to provide the most effective care virtually, with the aim of improving patient outcomes. As health professionals, part of providing a professional service is ensuring that practice is informed by the best available evidence.

This guideline is presented in the format comprising of clinical history/symptoms, differential diagnosis, investigations and management. Identification of 'Red Flags' or serious conditions associated with the disease is an essential part of this telehealth guideline as it aids the physician to manage patients safely and appropriately by referrals, if indicated during virtual telehealth assessment, to ER, family physicians or specialists for a face to face management.

Pharyngitis (sore throat) is a significant cause of community-associated infections. The primary purpose of this Telehealth Guideline is to provide the health physicians, who will be managing patients virtually, with a summary of the best available evidence for the virtual management of this very common condition among adult and pediatric patients.

The guideline is presented in the format of introduction, risk factors, clinical history/symptoms, differential diagnosis, investigations and management. Most importantly, however, this guideline

also identifies key 'Red Flags' or serious conditions associated with sore throat which should be managed by referral to ER or clinics for further face-to-face management.

DEFINITIONS/ABBREVIATIONS

Virtual Clinical Assessment: Is the evaluation of the patient's medical condition virtually via telephone or video call consultations, which may include one or more of the following: patient medical history, physical examination and diagnostic investigations.

Patient: The person who receives the healthcare services or the medical investigation or treatment provided by a DHA licensed healthcare professional.

ABBREVIATIONS

DHA	:	Dubai Health Authority
ER	:	Emergency Room
GAS	:	Group A Streptococcus <i>Streptococcus</i>
KPI	:	Key Performance Indicator
NICE	:	National Institute for Health and Care Excellence
OTC	:	Over the Counter
RADT	:	Rapid Antigen Detection Test

1. BACKGROUND

- 1.1. Acute pharyngitis is one of the most common conditions encountered in the community. Most cases of acute pharyngitis are caused by respiratory viruses and are self-limited. However, symptoms of viral pharyngitis broadly overlap with pharyngitis caused by important treatable causes, such as group A Streptococcus (GAS).
- 1.2. Using a systematic approach to diagnosis can help to reduce inappropriate use of antibiotic by identifying which patients require further testing and/or antibiotic treatment, and also help to determine which patients have serious conditions that need referral for further management.

2. SCOPE

- 2.1. Telehealth services in DHA licensed Health Facilities.

3. PURPOSE

- 3.1. To support the implementation of Telehealth services for patients with complaints of Sore Throat in Dubai Health Authority (DHA) licensed Health Facilities

4. APPLICABILITY

- 4.1. DHA licensed physicians and health facilities providing Telehealth services.
- 4.2. Exclusion for Telehealth services are as follows
 - 4.3. Emergency cases where immediate intervention or referral is required.

4.4. Prescribe Narcotics, Controlled or Semi-Controlled medications.

5. RECOMMENDATION

5.1. Etiology

Causes of sore throat can be broadly categorized as infectious (usually viral or bacterial) and noninfectious. The two most common infectious causes are respiratory viruses and group A *Streptococcus* (GAS).

5.2. Clinical Features/Symptoms/Investigation:

Most patients with pharyngitis of any cause present with a sore throat that worsens when swallowing. Neck pain or swelling due to regional lymphadenopathy commonly accompany sore throat. Fever, headache, fatigue, and malaise are variably present. The specific microbiologic cause of pharyngitis can rarely be distinguished based on clinical features alone. However, understanding the relative prevalence of the causes of pharyngitis and their clinical features can help focus evaluation.

5.2.1. Identifying patients with respiratory viral syndromes:

Respiratory viruses are the most common causes of acute pharyngitis, accounting for approximately 25 to 45% of cases. Adenovirus, rhinovirus, and coronaviruses are among the leading causes of viral pharyngitis. Other respiratory viruses that cause pharyngitis include

enteroviruses, influenza A and B, parainfluenza viruses, and respiratory syncytial virus.

Distinguishing between the two most common infectious etiologies of acute pharyngitis, respiratory viruses and group A *Streptococcus* (GAS), is important because management strategies differ. Antibiotic treatment is recommended for patients with GAS pharyngitis, whereas supportive care is sufficient for patients with viral pharyngitis.

Patients with pharyngitis caused by respiratory viruses usually have other signs and symptoms of upper respiratory tract infection, such as fatigue, nasal congestion, and cough. Coryza, conjunctivitis, sneezing, hoarseness, ear pain, sinus discomfort, oral ulcers, and a viral exanthem. Fever associated with viral upper respiratory tract infection is typically low grade except in patients with influenza.

For patients with symptoms that strongly suggest a viral upper respiratory tract infection, the diagnosis of viral pharyngitis can be made clinically.

Features that favor the diagnosis of a respiratory viral syndrome include (Refer to APPENDIX 1):

- a. Cough (often with fever and malaise)

- b. Nasal congestion
- c. Conjunctivitis
- d. Coryza
- e. Oral ulcer
- f. Viral exanthem (patient can send a picture of his rash to the call center or via video consultation)

Photo: Multiple erythematous macules are present on the skin of patient with a viral exanthem



5.2.2. Identifying patients with Group A Streptococcus

GAS is the most common bacterial cause of acute pharyngitis and is estimated to cause approximately 5 to 15% of cases of acute pharyngitis in adults in developed countries. Rates are higher in less developed countries. Classic signs and symptoms of GAS pharyngitis include:

- a. Acute-onset sore throat
- b. Fever
- c. Occurrence in a younger adult
- d. Exposure to others with GAS pharyngitis also make the diagnosis more likely.

e. Patchy tonsillar exudates (white spot on the tonsil)

f. Strawberry tongue (e.g., Scarlet fever),
patient can describe it, or send a picture of
it to the call center or via video
consultation.



g. A scarlatiniform rash, (patient can send a
picture of his rash to the call center or via
video consultation)



h. Palatal petechiae (patient can send a
picture of his rash to the call center or via
video consultation)



i. Pharyngeal edema (for face to face
consultation)

j. Prominent, tender, anterior cervical lymphadenopathy (for face to
face consultation and Virtual clinic consultation)

5.3. Modified Centor Criteria

5.3.1. The Infectious Diseases Society of America and the American Heart Association recommend using clinical judgment to determine who should

be tested for GAS; by contrast, the European Society of Clinical Microbiology and Infectious Diseases endorse use of the Centor criteria.

5.3.2. The Modified Centor criteria have been developed to predict bacterial infection in acute sore throat. The 5 Centor criteria are: Age, presence of tonsillar exudate, tender anterior cervical lymphadenopathy or lymphadenitis, history of fever and an absence of cough.

5.3.3. Refer to APPENDIX 2 for Modified Centor Score Criteria

5.3.4. Refer to APPENDIX 3 for Estimating probability of Streptococcal Pharyngitis using the Modified Centor Score

6. COMPLICATIONS AND DIFFERENTIAL DIAGNOSIS

In addition to causing acute pharyngitis, GAS infection can lead to suppurative and non-suppurative complications.

6.1. Suppurative complications of GAS pharyngitis are due to invasion of the organism beyond the pharynx and include

- 6.1.1. Otitis media,
- 6.1.2. Peritonsillar cellulitis
- 6.1.3. Abscess
- 6.1.4. Sinusitis
- 6.1.5. Cellulitis/impetigo

- 6.1.6. Meningitis
- 6.1.7. Bacteremia
- 6.1.8. Necrotizing fasciitis.

6.2. Nonsuppurative complications of GAS pharyngitis are immune mediated and include

- 6.2.1. Acute rheumatic fever
- 6.2.2. Post-streptococcal glomerulonephritis
- 6.2.3. Reactive arthritis.

Prevention of these complications is a key reason for treating GAS pharyngitis with antibiotics.

7. MANAGEMENT

- 7.1. Refer to APPENDIX 4 for the Virtual Management of Sore Throat Algorithm
- 7.2. Refer to APPENDIX 5 for the Treatment of Pharyngitis due to Group A Streptococcus (GAS)
- 7.3. Non-pharmacological Treatment: Contrary to provider preconceptions, receiving an antibiotic prescription is not a top priority for patients seeking care. Overtreatment of acute pharyngitis represents a major cause of inappropriate antibiotic use. The Non-pharmacological treatment plan should include the following:
 - 7.3.1. Validate patient's goals and concerns

- 7.3.2. Educate about the expected clinical course and time to improvement
 - 7.3.3. Consume warm fluids, teas with honey, and soups and to let ice chips or popsicles melt in their mouth.
 - 7.3.4. Emphasize open communication to bring worsening symptoms or lack or expected improvement to attention
- 7.4. Pharmacological Treatment: Pain relief is one of the most important reasons for patient visits for acute pharyngitis. The pharmacological treatment plan includes the following
- 7.4.1. Systemic oral analgesic includes the following:
 - a. Ibuprofen (ADULT and CHILD over 12 years, initially 300–400 mg 3 – 4 times daily; increased if necessary, to max. 2.4g daily; maintenance dose of 0.6–1.2g daily may be adequate) and/or
 - b. Paracetamol (Panadol). Dosage of paracetamol for adults is 0.5–1g by mouth every 4–6 hours to a max. of 4g daily;
- NSAIDs like ibuprofen and paracetamol, have all been shown to provide sore throat pain relief; ibuprofen appears to be somewhat more effective than paracetamol, although it is uncertain if the efficacy benefit is clinically meaningful in treating pharyngitis. The choice among them

depends on patient preference after taking into account the side effect profile of the treatment(s) in the context of the patient's comorbidities

7.4.2. Topical therapies (e.g. strepsils lozenge) alone are a reasonable alternative for patients who want to avoid systemic therapy or are at higher risk for side effects from it, but their duration of effectiveness is shorter than for systemic therapies. It is also reasonable to use topical therapies in combination with systemic therapy. Topical therapies in the form of lozenges or sprays have the advantages of direct application to the affected throat area, rapid onset of action, and minimal toxicity risk.

7.4.3. Antibiotic treatment for GAS Pharyngitis

- a. Penicillin — Penicillin is the treatment of choice for group A *Streptococcus* (GAS) pharyngitis due to its efficacy, safety, narrow spectrum, and low cost.
- b. For most adult patients, we use oral penicillin V 500 mg two to three times daily for 10 days. Oral amoxicillin is also a reasonable option.
- c. For most children, use either oral penicillin V or amoxicillin. Amoxicillin is often preferred for young children because the taste of the amoxicillin suspension is more palatable than that of penicillin.

- d. The duration of therapy for oral penicillin or amoxicillin is 10 days. Although symptoms typically improve within the first few days of treatment, treating for 10 days appears to enhance the rate of GAS eradication from the oropharynx when compared with 5 or 7 days.
- e. Alternatives to penicillin — Cephalosporins, clindamycin, and macrolides are alternatives for patients who are allergic to penicillin or who cannot otherwise tolerate penicillin.
- f. For patients with mild, non-IgE-mediated reactions to penicillin (e.g., maculopapular rash beginning days into therapy), select a first-generation cephalosporin such as cephalexin because of its narrow spectrum and the low likelihood of cross-reactivity.
- g. For patients with mild, possibly IgE-mediated reactions (e.g., urticaria or angioedema but NOT anaphylaxis), use a second- or third-generation cephalosporin with a side chain that is dissimilar to penicillin, such as cefuroxime, cefdinir, or cefpodoxime.
- h. When using an oral cephalosporin, generally treat for 10 days. A 5-day treatment course with cefdinir or cefpodoxime is also acceptable.
- i. For patients with a history of severe angioedema and/or anaphylaxis or with serious delayed reactions or for patients who cannot take

cephalosporins, generally use a macrolide, such as azithromycin. A major advantage of azithromycin is that it can be given for a three- or five-day course due to its extended half-life.

- j. For patients with known or suspected macrolide-resistant GAS who cannot tolerate cephalosporins, we treat with a 10-day course of clindamycin.

7.5. Follow-up

7.5.1. The great majority of patients who have presumed viral pharyngitis or who test negative for group A *Streptococcus* (GAS) pharyngitis recover fully within five to seven days without specific treatment.

7.5.2. Patients with GAS pharyngitis usually recover sooner, often within 24 to 72 hours of starting antibiotics.

7.5.3. Follow-up call should be arranged within 7days for patients with suspected viral pharyngitis and within 72hours for those with GAS. Failure to improve within these time periods should raise suspicion for alternative diagnoses or complications:

- a. For adults with presumed viral pharyngitis or for those who test negative for GAS and do not improve in seven days, referral should be considered for additional evaluation of previously unsuspected

- causes, such as infectious mononucleosis, acute HIV infection, *A. haemolyticum* or *F. necrophorum* infection, suppurative complications (e.g., peritonsillar abscess), or noninfectious causes.
- b. For adults with confirmed GAS pharyngitis who worsen or fail to improve within 72 hours, evaluation for suppurative complications, such as a peritonsillar abscess, or an alternative cause superimposed on chronic GAS carriage should be considered.

8. REFERRAL CRITERIA AND RED FLAGS

If a patient meets any of the below referral criteria, then he or she should be referred to specialists or ER as appropriate as shown below.

8.1. Referral to ER

- 8.1.1. Stridor
- 8.1.2. Difficulty swallowing (particularly own saliva)
- 8.1.3. Shortness of breath
- 8.1.4. Severe and intolerable pain
- 8.1.5. Immune compromised patients example receiving chemotherapy or systemic corticosteroids.
- 8.1.6. Neck stiffness
- 8.1.7. Severe dehydration (because unable to drink)

8.1.8. The patient has symptoms and signs suggestive of serious illness and/or complications (particularly pneumonia, mastoiditis, peritonsillar abscess, peritonsillar cellulitis, intraorbital and intracranial complications)

8.2. Referral to Specialist

8.2.1. At high risk of serious complications because of pre-existing comorbidity. This includes patients with significant heart, lung, renal, liver or neuromuscular disease, cystic fibrosis, and young children who were born prematurely .

8.2.2. Symptoms unresponsive to medications, or new symptoms suggesting complications (e.g. otitis media, sinusitis, chronic bronchitis, exacerbations of reactive airway disease).

8.2.3. The patient is older than 65 years with acute cough and two or more of the following criteria, or older than 80 years with acute cough and one or more of the following criteria:

- a. hospitalization in previous year
- b. type 1 or type 2 diabetes
- c. history of congestive heart failure
- d. current use of oral glucocorticoids.

REFERENCES

1. Centre for Clinical Practice at NICE (UK) (2008). Respiratory Tract Infections - Antibiotic Prescribing: Prescribing of Antibiotics for Self-Limiting Respiratory Tract Infections in Adults and Children in Primary Care. *National Center for Biotechnology Information*. [online] Available at: <https://www.ncbi.nlm.nih.gov/pubmed/21698847> [Accessed 25 Jul. 2019].
2. Chow, A. and Doron, S. (2019). *Evaluation of acute pharyngitis in adults*. [online] Uptodate.com. Available at: https://www.uptodate.com/contents/evaluation-of-acute-pharyngitis-in-adults?search=acute%20pharyngitis&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1 [Accessed 25 Jul. 2019].
3. NCBI (2019). *Streptococcus pyogenes*. Basic Biology to Clinical Manifestations. *National Center for Biotechnology Information*. [online] Available at: <https://www.ncbi.nlm.nih.gov/pubmed/26866208> [Accessed 25 Jul. 2019].

APPENDICES

APPENDIX 1 - SUMMARIES OF CLINICAL FEATURES OF GROUP A *STREPTOCOCCUS* PHARYNGITIS AND VIRAL PHARYNGITIS

GAS Pharyngitis	Viral Pharyngitis
Sudden onset of sore throat	Cough (often with fever and malaise)
Fever	Nasal congestion
Tonsillopharyngeal and/or uvular edema (this applies to patients who have consultation via virtual clinic or face-to-face)	Coryza
Patchy tonsillar pharyngeal exudates	Conjunctivitis
Anterior cervical adenitis (tender lymph nodes) (this applies to patients who have consultation via virtual clinic or face-to-face)	Hoarseness
Scarlatiniform skin rash (Scarlet fever) (this applies to patients who have consultation via video, virtual clinic or face-to-face)	Oral ulcers
History of GAS exposure	Viral exanthema (this applies to patients who have consultation via video, virtual clinic or face-to-face)

APPENDIX 2 – MODIFIED CENTOR SCORE CRITERIA

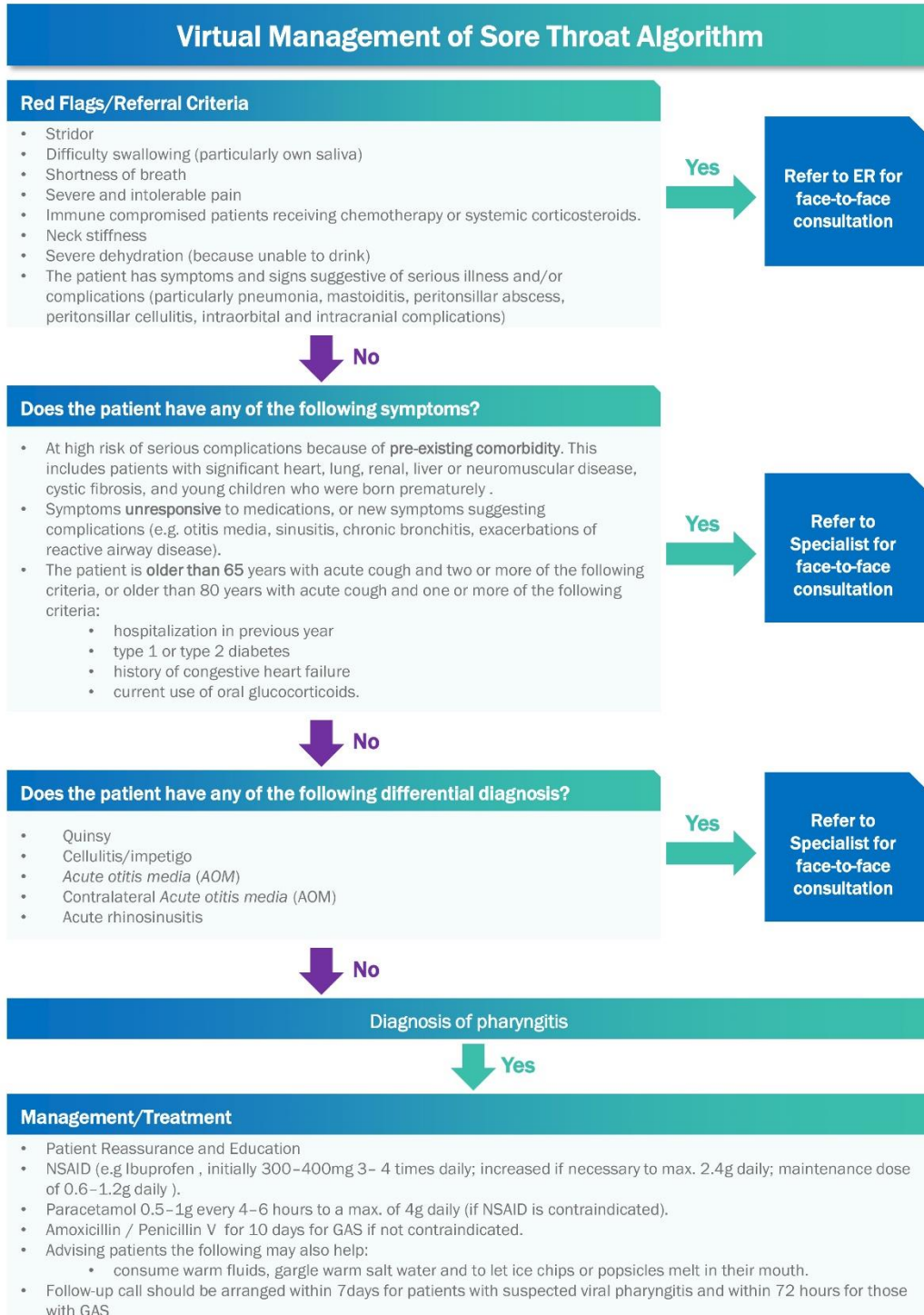
Criteria	Points
Temperature >38°C	1
Absence of cough	1
Swollen, tender anterior cervical nodes	1
Tonsillar swelling or exudate	1
Age	
3-14 years	1
15-44 years	0
45 years or older	-1

APPENDIX 3 - ESTIMATING PROBABILITY OF STREPTOCOCCAL PHARYNGITIS USING THE MODIFIED CENTOR SCORE

Score	Risk of GAS	Suggested Management
≤ 0	1% to 2.5%	No further testing or antibiotic
1	5% to 10%	No further testing or antibiotic
2	11% to 17%	*RADT or Throat Swap Culture, antibiotic only if +ve
3	28% to 35%	RADT or Throat Swap Culture, antibiotic only if +ve
≥ 4	51% to 53%	Treat empirically with antibiotic

*Rapid antigen detection test

APPENDIX 4 – VIRTUAL MANAGEMENT OF SORE THROAT ALGORITHM



APPENDIX 5 - TREATMENT OF PHARYNGITIS DUE TO GROUP A *STREPTOCOCCUS (GAS)*

Antibiotic Class	Drug	Dosing in Adults	Advantages	Disadvantages
Penicillin (preferred)	Penicillin V	500 mg orally two to three times daily for 10 days	Narrow spectrum No documented resistance Low cost	
	Amoxicillin*	500 mg orally BID for 10 days 1000 mg (immediate release) once daily for 10 days	Also available as once-daily extended-release tablet	
	Penicillin G benzathine* (Bicillin L-A)	1.2 million units IM as a single dose	Can be given as a single dose Ensured adherence Only drug studied for prevention of acute rheumatic fever	Variable availability High cost Injection site pain
Cephalosporins (potential alternatives for mild reactions to penicillin)	Cephalexin* (first generation)	500 mg orally twice daily for 10 days	High efficacy rate Narrower spectrum than later-generation cephalosporins	Broader spectrum than penicillin Greater potential to induce antibiotic resistance
	Cefadroxil* (first generation)	1 g orally daily for 10 days	Once daily High efficacy rate	Broader spectrum than penicillin

			Narrower spectrum than later-generation cephalosporins	Greater potential to induce antibiotic resistance
	Cefuroxime* (second generation)	250 mg orally twice daily for 10 days	High efficacy rate Narrower spectrum than later-generation cephalosporins	Broader spectrum than penicillin and first-generation cephalosporins Greater potential to induce antibiotic resistance
	Cefpodoxime* (third generation)	100 mg orally twice daily for 5 to 10 days	High efficacy rate FDA approved for 5-day course	Broader spectrum than penicillin and earlier-generation cephalosporins Greater potential to induce antibiotic resistance
	Cefdinir* (third generation)	300 mg orally twice daily for 5 to 10 days or 600 mg orally once daily for 10 days	Once-daily option High efficacy rate FDA approved for 5-day course	Broader spectrum than penicillin and earlier-generation cephalosporins Greater potential to induce antibiotic resistance
	Cefixime (third generation)	400 mg orally once daily for 10 days	Once daily High efficacy rate	Broader spectrum than penicillin Greater potential to induce antibiotic resistance

Macrolides (alternatives for patients with anaphylaxis or other IgE-mediated reactions or severe delayed reactions to penicillin ^A)	Azithromycin	500 mg orally on day 1 followed by 250 mg orally on days 2 through 5 Alternate dosing: 500 mg orally once daily for 3 days	Once daily Can be given as a 3- or 5-day course due to extended half-life	Growing rates of resistance Rarely associated with prolonged QT interval and TdP
	Clarithromycin*	250 mg orally twice daily for 10 days		Growing rates of resistance Greater gastrointestinal side effects than azithromycin Causes CYP3A4 drug interactions Rarely associated with prolonged QT interval and TdP
Lincosamides (alternative when macrolide resistance is a concern and penicillins and cephalosporins cannot be used)	Clindamycin	300 mg orally three times daily for 10 days		Growing rates of resistance High side-effect profile (i.e., gastrointestinal)

* Dose alteration needed for renal insufficiency.