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Review Article

Pharmacology: The Case of Acute Sinusitis and Pharyngitis

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ABSTRACT
This paper gives a case study on acute sinusitis which infects the throat of a person. This study gives the ideology of culturing of samples from throat and giving recommended medicines for the infection which are commonly levofloxacin ,moxifloxacin and amoxicillin

KEYWORD: acute sinusitis, levofloxacin, moxifloxacin, amoxicillin

SINUSITIS

For acute sinusitis, the most common pathogens include Moraxella catarrhalis, Haemophilus influenza, and Streptococcus pneumonia (Carol, 2015). Some of the antimicrobials for bacterial or non-allergic sinusitis include levofloxacin, moxifloxacin, and amoxicillin/clavulanate.

Levofloxacin

The role of this medication is to stop bacterial growth. Some of the side effects of this antimicrobial include trouble sleeping, lightheadedness, dizziness, headache, diarrhea, and nausea (Kroll, Hom&Ahuja et al., 2017). The medication is contraindicated for individuals allergic to it, as well as those who are allergic to quinolone antibiotics such as ofloxacin, moxifloxacin, and ciprofloxacin (Malaty, 2016).

Moxifloxacin

Similar to levofloxacin, moxifloxacin (which belongs to the class of quinolone antibiotics) seeks to stop the growth of bacteria. Some of the side effects with which it is associated include trouble sleeping, weakness, headache, lightheadedness, dizziness, diarrhea, and nausea. Indeed, the medication is contraindicated for individuals with allergies; especially to quinolone antibiotics (Carol, 2015). It is also contraindicated for persons undergoing vaccination or immunization because it impairs the work of live bacterial vaccines, an example being the typhoid vaccine (Kroll, Hom&Ahuja et al., 2017).

Amoxicillin/Clavulanate

Similar to the first two antimicrobials, amoxicillin/clavulanate seeks to stop bacterial growth. The medication's side effects include vomiting, nausea, and diarrhea. If used repeatedly, the medication could also cause new yeast infections or oral thrush (Malaty, 2016). Regarding contraindications, amoxicillin/clavulanate is not recommended for use if patients are allergic to

clavulanic acid. Also, it is contraindicated for patients who are allergic to cephalosporin antibiotics or penicillin (Carol, 2015). A notable feature that has also been documented entails the price of the medication. For levofloxacin's most common version, the price stands at around $8.99 (compared to $128.70 as the average retail price). On the other hand, the price for Moxifloxacin ranges from $50.43 to $161.46. Lastly, the lowest price for Amoxicillin/Clavulanate stands at about $12.90, but the average retail price is about $66.89 (Kroll, Hom&Ahuja et al., 2017).

Pharyngitis

Regarding the case of pharyngitis, the most common organism involves Group A beta-hemolytic streptococcus (GAS)(Cohen, Cohen & Levy et al., 2015). During the diagnosis of pharyngitis, some of the signs and symptoms considered include diarrhea, coryza, and cough for the case of viral pharyngitis. On the other hand, symptoms such as cervical adenopathy, temperatures exceeding 38^{o}C, and sore throat are characteristic of streptococcal pharyngitis (Dooling, Shapiro & Van Beneden et al., 2014). Major diagnostic tests include antigen detection testing and throat culture (Ebell, 2014). Antigen detection testing involves extracting group-specific carbohydrate antigens from the cell wall of the GABHS before conducting immunological reactions to identify the antigen. On the other hand, throat culture entails a laboratory diagnostic test

aimed at detecting thepresence of bacteria. Particularly, the process involves collecting samples from the throat via swabbing before placing the sample into cultures or special cups to provide room for the growth of infections (Cohen, Cohen & Levy et al., 2015).In relation to the management of pharyngitis, one of the recommendations involves performing blood exams. Additionally, the recommendations bar the administration of antibiotics unless the streptococcal infection's microbiologic confirmation is evident (Chiappini, Bortone& Di Mauro et al., 2017). In situations, where throat culture is conducted, the recommendations also bar the execution of susceptibility tests on isolates. Also, the recommendations avow that practitioners and patients should not shorten the antibiotic course. Lastly, the recommendations indicate that steroids should not be administered because they are likely to mask a possibly severe condition (Chiappini, Bortone& Di Mauro et al., 2017).For individuals who are allergic to penicillin (PCN), treatment choices vary among experts. The antibiotics selected ought to be unrelated to penicillin and examples include azithromycin, erythromycin, and cephalexin (Dooling, Shapiro & Van Beneden et al., 2014).

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