Medicolegal Implications of Common Rhinologic Medications

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KEYWORDS

• Steroids • Adrenal cortex hormones • Antibiotics or antibacterial agents • Narcotics • Informed consent • Malpractice • Jurisprudence

KEY POINTS

- Antibiotics, corticosteroids, and narcotics are classes of medications frequently associated with litigation.
- Allergic reactions to medications are a common complaint associated with lawsuits.
- Current medication lists and current allergies should be updated at each visit.
- Communication with patients is the key element to help minimize adverse events.

INTRODUCTION

As physicians, we have thousands of medications at our disposal; however, most rhinologists use a relatively limited number. Oral medications most commonly used include antibiotics, steroids, and narcotics in the postoperative period. Despite the common use of these medications, many providers are not familiar with the potential risks or the potential medicolegal ramifications of those risks.

The objectives of this review are to outline the existing data of the medicolegal implications of commonly used oral medications, including antibiotics, steroids, and narcotics. The authors discuss what is known about their specific risks and review the issues associated with lawsuits and how providers can educate patients and minimize the risk of litigation. Finally, the authors discuss informed consent for the use of medications.

Conflict of Interest: T.L. Smith is a research consultant for Intersect ENT.

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ANTIBIOTICS

The data supporting the use of antibiotics in acute rhinosinusitis and chronic rhinosinusitis are limited. There have been 2 Cochrane reviews evaluating the benefit of antibiotics for acute maxillary sinusitis, both of which reported statistical improvements in patients treated with antibiotics.[1,2] They support the use of antibiotics in these patients. For chronic rhinosinusitis, an iterative review published in 2013 considered the use of antibiotics an *option* (level B evidence), given the balance of benefits to harm as well as the modest reduction in symptoms following antibiotic use.[3]

Complications of Antibiotic Use

Allergy

Allergic reactions and anaphylaxis are always a concern when prescribing antibiotics. Penicillins and cephalosporins made up almost 60% of all antibacterial drugs sold in the United States in 2011 and were responsible for most of the allergic reactions.[4] These reactions are type I, immunoglobulin E (IgE)–mediated hypersensitivity reactions. The reported incidence of an allergy to an antibiotic, such as penicillin, is much higher in the general population than the IgE testing shows. Studies in patients that have reported penicillin allergies have shown that only between 0.3% and 3.0% of them have positive testing for a type I hypersensitivity reaction.[4]

Additionally, the cross reactivity between penicillin allergies and cephalosporin allergies are not as common as has been reported. Initial studies from the 1960s and 1970s report a cross reactivity rate of 8% to 18%. This rate may have been caused by minor contamination of cephalosporins by penicillin from the manufacturing process. More modern manufacturing involves synthetically synthesized cephalosporins rather than the earlier methods of using chemically modified penicillins to create cephalosporins. This process has essentially eliminated the risk of contamination.[4] Current data suggest the true cross reactivity to be between 1.0% and 2.55%, with first- and second-generation cephalosporins having higher rates of cross reactivity with penicillins.[4]

Antibiotic-associated diarrhea

Antibiotic-associated diarrhea (AAD) is a common side effect of antimicrobial therapy. Pseudomembranous colitis, a distinct subtype of AAD, is characterized by colonic mucosal necrosis and pseudomembrane formation. *Clostridium difficile*, an anaerobic, spore-forming, gram-positive bacillus, has been identified as the pathogen responsible for pseudomembranous colitis caused by disruption of the normal colonic flora caused by the antibiotic ingestion.[5]

C difficile infection is defined as at least 3 unformed stools in 24 hours and a positive stool test for *C difficile* toxin or endoscopic evidence of pseudomembranous colitis.[6] Disease severity can range dramatically from an asymptomatic colonization to fulminant colitis. The morbidity associated with infection is reported to be as high as 80%, with mortality rates up to 8%.[6] The incidence of *C difficile* colitis has increased during the decade from 1990 to 2000, with the reported incidence increasing from 0% to 3.2%.[5]

The most common risk factor for acquiring *C difficile* colitis is prior exposure to antibiotics. A recent meta-analysis reported that antibiotic usage led to a significantly higher risk of developing community-acquired *C difficile* infection compared with patients with no antibiotic exposure.[7] When evaluating a specific antibiotic class, clindamycin had the greatest risk of a *C difficile* infection. Other antibiotics also increased the risk but at various frequencies. Fluoroquinolones were the next most commonly associated antibiotic, followed by cephalosporins, penicillins, and macrolides; sulfonamide/trimethoprim had the lowest risk. Tetracyclines were not associated with an increased risk of *C difficile* infection[7] (**Table 1**).