

## Drug-induced Pseudochondritis: A Case Report

Dear Editor,

Ciprofloxacin and clindamycin are two antibiotics with different indications. Ciprofloxacin is a fluoroquinolone antibiotic used for the treatment of various infections, including urinary tract infections, prostatitis, gastrointestinal infections, and bone, joint, and soft-tissue infections.<sup>[1]</sup> It has been associated with several untoward effects such as gastrointestinal, neurologic, and musculoskeletal adverse effects,<sup>[2]</sup> although tendon rupture or tendinitis (usually of the Achilles tendon) is a known adverse effect. Early animal studies suggested an increased risk of cartilage damage and malformation among young animals;<sup>[3]</sup> we did not find any previous report of either chondritis or pseudochondritis following its administration. Similarly, no report of these two adverse effects exists from clindamycin, a lincosamide antimicrobial used for infections due to Gram-positive aerobic and anaerobic microorganisms including skin and soft-tissue infections, lung abscess, pharyngitis, and osteomyelitis. A 52-year-old male with a history of coronary artery bypass graft surgery was hospitalized with the chief complaint of the leg ulcer. The physical examination revealed large infectious ulcer on left leg with slightly purulent discharge. Laboratory studies showed leukocytosis (white blood cell: 18,500/mm<sup>3</sup>, Polymorphonuclear (PMN): 85%), anemia (hemoglobin: 10 g/dl), high erythrocyte sedimentation rate (ESR: 85 mm/h), and C-reactive protein (CRP: 56 mg/dl). Other laboratory tests were in reference ranges. At the beginning of hospitalization, the patient underwent venous and arterial Doppler

ultrasound, with the results being normal. At the 1<sup>st</sup> day, intravenous ciprofloxacin (400 mg every 12 h) and clindamycin (600 mg every 8 h) were started for the treatment of the infection.

Furthermore, the skin biopsy was performed, which was compatible with “stasis dermatitis” with the ulcer. Three days later, the patient complained of right ear swelling with severe pain and milder similar symptoms of the left ear. The physical examination revealed an erythematous, edematous, and tender right pinna [Figure 1], while the left ear was less erythematous [Figure 2]. He was afebrile, and vital signs were stable. The patient had no history of similar symptoms in the past. By consultation of the ear, nose, and throat specialist, the diagnosis of chondritis was made. However, the rheumatologic panel tests were all in the normal limits. According to the intense ear pain and erythematous pinna, and because other evaluations were unremarkable, we discontinued ciprofloxacin and clindamycin as possible causative agents for observed signs and symptoms. After 2 days, all signs and symptoms in both the ears resolved. Therefore, the diagnosis of drug-induced pseudochondritis was made, and the antibiotic regimen of intravenous piperacillin/tazobactam (4.5 g every 8 h) and vancomycin (1 g every 12 h) was replaced for the treatment of the infection with no recurrence of previous symptoms. At the 14<sup>th</sup> day of therapy, the ulcer was dried with no secretion, and the serum level of ESR and CRP dropped to 19 mm/h and 4 mg/dL, respectively. This case represents a possible and rare



**Figure 1:** Erythematous, edematous, and tender right pinna



**Figure 2:** Mild erythema of the left ear

adverse effect of either ciprofloxacin or clindamycin, bilateral ear pseudochondritis. Pseudochondritis manifests as skin involvement of the lobule with slight tenderness, which differs from true chondritis that involves only cartilaginous areas in several disorders, including relapsing polychondritis and Wegener's granulomatosis.<sup>[4]</sup> Differential diagnosis of pseudochondritis includes infections, trauma, insect bite, tophaceous gout, radiotherapy, allergy, and burn.<sup>[4]</sup> However, in our case, the patient's past medical history presents illness, and laboratory tests as well as the timing of the adverse effect occurrence and its full improvement after 2 days of discontinuation of the antibiotics exclude these other diagnoses. There is no report of this type of side effect from any other drug except for mafenide following its topical administration on the ears.<sup>[5]</sup> It seems that discontinuation of the possible causative drug is all that is required. Because of the coadministration of ciprofloxacin and clindamycin as well as no previous report, it is difficult to attribute this adverse effect to one drug. Therefore, at the present time, both the drugs should be considered as potential agents for this reaction. True differentiation from true chondritis is important to avoid unnecessary treatments and iatrogenic injuries.

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### Conflicts of interest

There are no conflicts of interest.

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