Listeria Infection from Infliximab Use

As the number of people treated with anti–tumor necrosis factor α (anti–TNF-α) agents for inflammatory joint disease increases, the amount of infection reports—including those of life-threatening opportunistic infections—also has risen. Clinicians from the University of California, Los Angeles, and Tufts University, Boston, Massachusetts, recently reported on a case of *Listeria* endocarditis associated with the use of infliximab (an anti–TNF-α agent) in a patient with psoriatic arthritis. In their case discussion, the researchers pose the question: Are these biologic agents (used as treatment for inflammatory arthritis) increasing the incidence of *Listeria* infections?

The authors say that theirs is the second published case of *Listeria* infection associated with infliximab in a patient with psoriatic arthritis, and it is the first case report of *Listeria* endocarditis associated with infliximab. Their patient, a 42-year-old woman, had a history of psoriatic arthritis and had been treated with infliximab for the past 6 months. At the time of presentation, she had received 5 monthly infusions at a dosage of 5 mg/kg, which she reported caused considerable relief of her arthritic and skin symptoms. The patient was afebrile on presentation and had an unremarkable physical examination (except for chronic changes of psoriatic arthritis). Her blood cultures were positive for *Listeria monocytogenes*. The patient was given high-dose ampicillin and recovered quickly while hospitalized. She was discharged with instructions to complete a 6-week course of therapy and, at the time of their report, was continuing to do well during follow-up.

According to the authors, their patient had *Listeria* endocarditis, a rare complication of bacteremia due to *Listeria*. Although another case of *Listeria* infection associated with infliximab use in a patient with psoriatic arthritis had been reported previously, they say their report was unique in that their patient was not simultaneously taking other immunosuppressive agents with infliximab, thus making it easier to narrow down the cause of the infection.

In addition to presenting this case report, the authors conducted a literature review whereby they identified 92 cases in the FDA Adverse Event Reporting System (AERS) of *Listeria monocytogenes* infection related to infliximab treatment. Of these cases, 16 patients died (15 had meningitis; 1 had sepsis). The authors also identified 33 previously published case reports of *Listeria monocytogenes* infection related to infliximab treatment. They included 24 of these cases in their review (9 cases were excluded due to non-English language).

They found the average number of infliximab doses prior to the *Listeria* infection to be 2.5 (based on data from 21 cases). The authors say that these results are consistent with data from the report of the FDA AERS, where infections occurred with a median of 2.5 doses. The most serious infections occurred after 3 or fewer infusions, although in clinical studies there seemed to be no correlation between the number of infusions and the rate of infectious events. They also note that almost all of the reported patients were taking other immunosuppressive therapies concurrently with infliximab treatment.

AERS reports suggest that the number of patients with *Listeria* may be higher than those reported by postmarketing. While the incidence of listeriosis among healthy individuals is 0.7 per 100,000 cases, the incidence may be as high as 210 per 100,000 cases among people with predisposing conditions (such as older age, pregnancy, diabetes mellitus, immunosuppression, HIV infection, liver failure, or splenectomy).

The authors report that anti–TNF-α therapy may be a significant risk factor for the development of listeriosis, although many of the patients included in their review were already immunocompromised due to chronic inflammatory illness and concurrent immunosuppressive therapy. *Listeria* infections also can originate from contaminated food or other sources, the authors say. The patient described in their case report did have a possible dietary source for the *Listeria*, since she ingested soft cheese and dairy products prior to admission. As such, the authors suggest advising patients to also avoid soft cheeses and undercooked meats when undergoing anti–TNF-α treatment.

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