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Authors

Takeshita, Junko
Shin, Daniel B
Ogdie, Alexis
[et al.](#)

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Abstract

Increased risk of opportunistic infections among patients with moderate-to-severe psoriasis: a population-based cohort study in the United Kingdom

Junko Takeshita,¹ Daniel B. Shin,¹ Alexis Ogdie,¹ Joel M. Gelfand¹

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¹University of Pennsylvania, Philadelphia, PA, United States

Infection is the second leading cause of death among psoriasis patients on phototherapy or systemic medications. The types of infections associated with psoriasis remain poorly understood. The aim of our study was to determine the risk of opportunistic infection (OI) among patients with psoriasis. We conducted a cohort study of patients with (N=199,700) and without (N=954,315) psoriasis in The Health Improvement Network electronic medical record database. Patients receiving phototherapy or systemic therapy were considered to have moderate-to-severe psoriasis (N=12,442). The OI outcome was defined by a diagnostic code for any one of the following: actinomycosis/nocardia, aspergillosis, BK virus, cytomegalovirus, cryptococcus, systemic mycoses, pneumocystis, progressive multifocal leukoencephalopathy, tuberculosis, and toxoplasmosis. The incidence rates of OI were 1.9, 1.8, and 3.8 per 10,000 person-years for all patients with psoriasis and those with mild and moderate-to-severe disease, respectively, versus 2.1 per 10,000 person-years for those without psoriasis. The most common OI among patients with psoriasis was tuberculosis with an incidence rate of 1.0 per 10,000 person-years. In multivariable Cox proportional hazards regression analyses adjusting for age, gender, body mass index, drinking, comorbid diseases, corticosteroid use, history of infection or hospitalization, and Townsend deprivation score, we found an increased risk of OI among patients with moderate-to-severe psoriasis compared with patients without psoriasis: hazard ratio 1.86 (95% confidence interval, 1.23-2.83). Risk of OI was not increased among patients with mild psoriasis. Our results suggest that increased awareness of OIs, particularly tuberculosis, may be important for psoriasis patients receiving therapies for moderate-to-severe disease.