Predictive factors of pneumocystis pneumonia in patients with rheumatic diseases exposed to prolonged high-dose glucocorticoids

We read with interest the article by Jun Won Park *et al*, describing in a retrospective study the prophylactic effect of trimethoprim-sulfamethoxazole (TMP-SMX) to prevent *Pneumocystis jiroveci* pneumonia (PCP) in patients with rheumatic diseases exposed to prolonged high-dose glucocorticoids.[1] High-dose glucocorticoid is indeed a well-known and major risk factor for PCP supporting the investigation carried out here. The conclusions of the work are that TMP-SMX prophylaxis is very effective and safe at preventing PCP.[2] TMP-SMX was also associated with a reduction in pneumocystis-related mortality, a very important result given that mortality is higher in patients suffering from systemic diseases, in particular in cases of granulomatosis with polyangiitis, than in HIV-infected patients.[3]

We agree with the need to assess the incidence of PCP in patients with rheumatic diseases, especially for those at highest risk. The results from this study are clear and convincing; they also confirm previously published works conducted on smaller cohorts.[4]

However, we believe this study would have been even more compelling had it included an analysis of risk factors associated with the occurrence of PCP in patients without prophylaxis.

Indeed, to our knowledge, no study assessing predictive factors of PCP among patients receiving high-dose glucocorticoids for systemic diseases exists. Yet, for the clinician and particularly the rheumatologist, defining which patients are at highest risk of developing PCP and should subsequently receive prophylaxis is the main concern in a clinical point of view. We believe a subanalysis of your cohort may bring some answers to this often-debated question. Presently, in the absence of randomised studies, recommendations for PCP prophylaxis are limited to patients suffering from granulomatosis with polyangiitis, patients treated by cyclophosphamide or high dose of methotrexate and patients receiving corticosteroids >20mgdaily for at least 30 days or >16 mg daily for at least 60 days associated with at least one of the following risk factors: age >50, malnutrition and lymphopenia $<600/mm^3$.[5]

These criteria remain imprecise and poorly documented. The present study may allow for a more thorough investigation of the risk factors associated with PCP in the population not under prophylaxis. In our view, this additional analysis might add a lot of value to the present work.

Julia Herrou, Victoire De Lastours

Department of Medicine, Beaujon University Hospital, Clichy, France

Correspondence to Mrs Julia Herrou, Department of Medicine, Beaujon University Hospital, Clichy 92110, France; juliaherrou92@hotmail.fr

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; internally peer reviewed.

To cite Herrou J, De Lastours V. *Ann Rheum Dis* Epub ahead of print: [*please include* Day Month Year]. doi:10.1136/annrheumdis-2018-214718

Received 7 November 2018
Accepted 13 November 2018

Ann Rheum Dis 2018;**0**:1. doi:10.1136/annrheumdis-2018-214718

REFERENCES

1 Park JW, Curtis JR, Moon J, *et al*. Prophylactic effect of trimethoprim-sulfamethoxazole for pneumocystis pneumonia in patients with rheumatic diseases exposed to prolonged high-dose glucocorticoids. *Ann Rheum Dis* 2018;77:644–9.
2 Yale SH, Limper AH. Pneumocystis carinii pneumonia in patients without acquired immunodeficiency syndrome: associated illness and prior corticosteroid therapy. *Mayo Clin Proc* 1996;71:5–13.
3 Sowden E, Carmichael AJ. Autoimmune inflammatory disorders, systemic corticosteroids and pneumocystis pneumonia: a strategy for prevention. *BMC Infect Dis* 2004;4:42.
4 Godeau B, Coutant-Perronne V, Le Thi Huong D, *et al*. Pneumocystis carinii pneumonia in the course of connective tissue disease: report of 34 cases. *J Rheumatol* 1994;21:246–51.
5 Khellaf M, Godeau B. [Pneumocystis pneumonia among patients with systemic diseases]. *Presse Med* 2009;38:251–9.