

## Response to: 'Patients with lupus with COVID-19: University of Michigan experience' by Wallace *et al*

We thank Wallace and Waher<sup>1</sup> for their interest in our study on the course of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) disease 2019 (COVID-19) in a case series of patients with systemic lupus erythematosus (SLE) under long-term treatment with hydroxychloroquine (HCQ) and the reporting of their own case series.<sup>1,2</sup> Their results corroborate those from our and other recently published observational studies in SARS-CoV-2-infected patients with SLE pointing to a lack of a preventive effect of HCQ,<sup>3,4</sup> and furthermore underscore the notion that a high percentage of these patients suffer from several comorbidities.<sup>1,2</sup> In their case series patients with SLE appeared to be more prone to obesity (80%), chronic obstructive pulmonary disease or asthma (60%), hypertension (20%), diabetes (20%), and chronic kidney disease (20%),<sup>1</sup> while in our cohort the main comorbidities were obesity or overweight (71%), chronic kidney disease (47%) and hypertension (35%).<sup>2</sup> These chronic medical conditions have all been reported to be associated with severe forms of COVID-19,<sup>5-7</sup> and the presence of a similar association with symptomatic or severe cases of COVID-19 in patients with SLE therefore does not come as a surprise.

While the presence of an underlying immunosuppressed condition has not yet been associated with an increased death rate during the course of COVID-19,<sup>5</sup> it is nevertheless important to note that, both in our case series and that reported by Wallace and Waher, 71% and 41% and 80% and 60%<sup>1</sup> of the patients were treated with glucocorticoids or immunosuppressants, respectively. In a recent study on COVID-19 in immune-mediated inflammatory diseases such as psoriasis, rheumatoid arthritis, ankylosing spondylitis and inflammatory bowel diseases, the use of oral glucocorticoids and methotrexate was higher among patients for whom hospitalisation was warranted.<sup>8</sup> These drugs might therefore represent a risk factor for developing symptomatic or severe forms of COVID-19, although more data will be required to confirm a possible, causative, link between immunosuppressive therapy and COVID-19 severity.

Patients with SLE are possibly at risk to develop symptomatic or severe COVID-19, not because of their primary disease, glucocorticoid and/or immunosuppressive therapy, but as a consequence of associated comorbidities. Although patients with SLE have a greater burden of comorbidities such as hypertension, chronic kidney disease and hyperlipidaemia,<sup>9</sup> the prevalence of obesity and overweight is less documented in SLE and may vary depending on the country.<sup>9,10</sup> On the other hand, it is important to note that patients with lupus are mostly women of young age, two factors associated with a better prognosis of COVID-19.<sup>5,6</sup> Notwithstanding the similar conclusions that can be drawn from our case series and that of Wallace and Waher,<sup>1</sup> only larger cohort studies based on the detection of SARS-CoV-2, as well as the presence of specific anti-SARS-CoV-2 antibodies, will provide detailed information on the incidence and severity of COVID-19 in this fragile population. In this respect, several national and international registers have been launched at the beginning of the pandemic, and we expect that the forthcoming results will provide more insight into the complexity of risk factor involvement in COVID-19 severity in SLE and other autoimmune diseases.

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