Response to: 'Correspondence on 'Impact of COVID-19 pandemic on patients with large-vessels vasculitis in Italy: a monocentric survey' by Comarmond *et al*

We read with interest the correspondence by Comarmond *et al*[1] on our study about the impact of novel COVID-19 on Italian patients with large-vessels vasculitis (LVV).[2] COVID-19 has been declared a global pandemic by WHO in March 2020. Since then, the number of patients diagnosed with SARS-CoV-2 infection has rapidly grown and today more than 46 million cases worldwide have been identified.[3]

International and National surveys on different groups of patients with chronic inflammatory diseases have been performed to evaluate the impact of COVID-19 pandemic among frail patients.[4 5] After a first study by our group, based in Milan, Italy,[2] Comarmond *et al* reported the results of a survey conducted among patients affected by LVV, followed up at Pitié-Salpêtrière Hospital (Paris, France).[1] Both studies were performed during the so-called 'first wave' of the pandemic, in areas characterised by a high rate of infection, and among patients followed up in tertiary referral centres. In addition, the number of patients included and the ratio between patients affected by the two main LVVs (ie, Giant cell arteritis and Takayasu's arteritis) were similar. Nonetheless, some of the results obtained seem controversial.

In our cohort of LVV patients, we detected a low rate of SARS-CoV-2 infection (2.5%), with no related deaths, whereas the infection rate reported by Comarmond *et al* was double (5.4%) and associated with a lethality of 12.5%. The French authors suggested that a higher use of tocilizumab in our cohort (33% vs 10%) might be accounted for the difference in the observed outcome. However, a few elements should be pointed out when comparing the two cohorts.

First, while we included only LVV-COVID-19$^+$ patients diagnosed by means of reverse transcription CR (RT-PCR), the standard recommended confirmatory test,[6] in only two of the eight patients reported by the French authors a positive RT-PCR was identified.

Second, the French survey was conducted 1 month after ours and evaluated a time span including not only March but also April. This difference has two main consequences. Intuitively, a longer period of observation implies a higher probability of finding new cases. In addition, in March the availability of RT-PCR tests was extremely limited in Italy and, since we aimed at identifying only RT-PCR positive COVID-19 cases, this might have reduced the number of patients correctly diagnosed.

Third, the lethality rate described by Comarmond *et al* is a consequence of the death of a single 57-year-old patient affected by Takayasu's arteritis. However, it should be underlined the fact that the past medical history of this patient was characterised by a large number of comorbidities (eg, arterial hypertension, diabetes, cardiovascular disease and B lymphoma), some of them not directly related to the primary diagnosis. As a consequence, it is quite hard to properly estimate the influence of each of these factors on the final outcome.

The last point refers to the impact of the interleukin-6 receptor antagonist tocilizumab on the outcome of LVV patients. The French authors correctly pointed out that one patient out of three from our cohort was treated with tocilizumab at the time covered by the survey, a fraction considerably higher than that reported by their group (10%). This observation led them to hypothesise a positive influence of this therapy on the disease course. However, none of the four LVV patients with COVID-19 from our study was concurrently treated with tocilizumab. Moreover, three recently published randomised controlled trials failed to show clear evidence of efficacy of tocilizumab in the management of COVID-19 patients outside the intensive care unit.[7–9] Conversely, both the patients affected by Takayasu's arteritis diagnosed with SARS-CoV-2 infection included in our survey were concomitantly on anti-tumor necrosis factor (TNF)α drugs. The potential beneficial effect of this family of drugs on the outcome of COVID-19 patients cannot be inferred by an observational study like ours, but it is already under evaluation in a prospective controlled trial (ie, ISRCTN33260034).

Multicentre International surveys on LVV patients are eagerly warranted to properly understand the outcome of COVID-19 in this subset of patients.

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