Impact of delayed diagnoses at the time of COVID-19: increased rate of preventable bilateral blindness in giant cell arteritis

The outbreak of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) COVID-19 has significantly challenged hospitals surge capacity and the perceived priorities for medical investigations performed to diagnose or monitor other diseases.[1 2] Recent studies have reported increased mortality in out-of-hospital acute coronary syndromes, not fully explained by COVID-19 cases alone, and potentially related to the patients' reluctance to seek medical care out of fear of the infection threat.[3 4] Moreover, in the field of rheumatological disorders, general systemic symptoms, often evaluated by telephone triage, might be wrongly attributed to COVID-19, leading to delayed referral to specialist attention. The consequences of delayed diagnosis in rheumatology can be particularly evident in giant cell arteritis (GCA), leading to the most dreaded complication of the disease: irreversible visual loss. The aim of this analysis was to assess the rate of permanent ischaemic complications due to GCA since the COVID-19 pandemic.

We retrospectively assessed the clinical characteristics of consecutive patients referred to the fast-track clinic at the University of Pavia, Italy. The fast-track service, including the use of colour duplex sonography, has been operating since 2016 to urgently assess patients with suspected GCA and has led to a significant reduction of permanent visual loss.[5] We compared the period since the COVID-19 outbreak (21 February 2020–30 April 2020) with the corresponding period in 2019. The primary outcome was the incidence and severity (monolateral vs bilateral) of visual loss attributable to GCA.

Since the outbreak of SARS-CoV-2, there has been a reduction in the requests for fast-track assessments by 75% compared with the same time frame in 2019, despite a regularly operating service. Since the COVID-19 pandemic, there were two cases (50%) of irreversible bilateral visual loss due to GCA out of four referred patients. Bilateral arteritic anterior ischaemic optic neuropathy (AION) was confirmed by ophthalmology evaluation. Both patients had experienced symptoms that could have prompted the diagnosis for over 30 days prior to the occurrence of rapidly progressing visual manifestations. In the corresponding period in 2019, one case of monolateral AION due to GCA out of 16 referrals (6%) had been recorded, with a duration of symptoms prior to diagnosis of 10 days (table 1). Furthermore, over the entire course of the previous year (21 February 2019–20 February 2020), there had been only two patients with GCA-related monolateral AION and no cases of bilateral blindness.

Early diagnosis is of paramount importance in many rheumatological conditions for which prompt initiation of treatment has immediate and long-term implications on the disease course and on the prevention of permanent disability. GCA onset is characterised by a series of clinical diagnostic clues that, although often non-specific, can be helpful in prompting the diagnosis and preventing irreversible life-changing complications. This report highlights the severity of indirect morbidity related to COVID-19 induced by delayed referral of medical emergencies in a climate of fear and avoidance of routine diagnostics during the pandemic.

Table 1 Clinical characteristics of consecutive patients referred to a fast-track clinic for suspected GCA

	Previous year period (21 February 2019–30 April 2019)	COVID-19 period (21 February 2020–30 April 2020)
Number of patients referred for suspected GCA	16	4
Female, n (%)	13 (81)	4 (100)
Age (years), mean±SD	71±10	79±6
Duration of symptoms prior to diagnosis (days), median (IQR)	8 (6–28)	31 (14–36)
GCA-related clinical manifestations		
Headache, n (%)	13 (81)	3 (75)
Visual loss, n (%)	1 (6) monolateral	2 (50) bilateral
Jaw or tongue claudication, n (%)	6 (37)	1 (25)
Scalp tenderness, n (%)	4 (25)	0
PMR or MSK symptoms, n (%)	10 (63)	3 (75)
Constitutional symptoms, n (%)	7 (44)	2 (50)

GCA, giant cell arteritis; MSK, musculoskeletal symptoms; n, number; PMR, polymyalgia rheumatica.

Sara Monti, Paolo Delvino, Elisa Bellis, Alessandra Milanesi, Fabio Brandolino, Carlomaurizio Montecucco

Rheumatology, Fondazione IRCCS Policlinico San Matteo, Pavia, Lombardia, Italy

Correspondence to Dr Sara Monti, Rheumatology, Fondazione IRCCS Policlinico San Matteo, 27100 Pavia, Italy; sara.saramonti@gmail.com

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ORCID iD
Sara Monti http://orcid.org/0000-0002-1800-6772

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