

Incidence of the SARS-CoV-2 Infection Amongst Patients with Rheumatological Conditions: A Single Centre Study

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The SARS-CoV-2 pandemic has affected the lives of many individuals, directly or indirectly. Patients with rheumatological conditions have felt the effects of the pandemic more so than healthy individuals, either due to their assumptions of being immunosuppressed, either because of their underlying conditions or their treatments. This fear may lead to the discontinuation of their treatments, avoidance of doing their drug monitoring tests, or failure to attend their appointments.

To assess the effects of the pandemic on rheumatological patients, multiple efforts have been undertaken. The greatest one is the Global Rheumatology Alliance, in which any rheumatologist can register their patients who have been affected by the SARS-Cov-2 infection.¹

Several factors have been reported to be associated with the worst outcomes regarding SARS-CoV-2 infection, including systemic lupus erythematosus (SLE), high disease activity, high-dose steroids, rituximab, abatacept, and JAK inhibitors.²

However, presenting local data to patients might have more impact in alleviating patients' concerns, and providing them with the answers they seek. We present the individuals who have been affected by SARS-CoV-2 infection in a community rheumatology center in Ottawa, Canada, between March 2020 and October 2021.

The number of patient visits between March 2020 and October 2021 was about 4,800 (virtual and in-person). Infections were self-reported by the patients during their consultations. Thirty-one individuals were affected

by the SARS-CoV-2 infection, nine of whom were males and 22 were females. The age of these patients ranged from 25-86 years, with a median age of 58 years. The BMI of patients ranged from 19-51 with a median BMI of 30.75. Nine individuals were born outside of Canada. Thirty individuals had an autoimmune rheumatic condition. One had gout and metabolic syndrome. Twenty-seven individuals were taking either conventional disease-modifying antirheumatic drugs (csDMARDs), or biologic DMARDs, or both (see Table). Six patients were hospitalized due to the SARS-CoV-2 infection and were treated according to local guidelines. Only one patient died due to SARS-CoV-2 infection. She was 86 years old with gout, diabetes mellitus, hypertension, stage 3 chronic kidney disease (CKD3), and had a BMI of 43 (she was not on DMARDs or biologics). In our centre, we did not observe increased mortality in rheumatological patients who are taking csDMARDs or bDMARDs.

The following table (see next page) summarizes the patients' characteristics and outcomes.

References:

1. Covid-19 Global Rheumatology Alliance. Available at rheum-covid.org. Accessed February 6, 2022.
2. RheumNow. Available at rheumnow.com. Accessed February 6, 2022.

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Table:
Patient Characteristics and Outcomes

Gender	Age	Diagnosis	DMARD Therapies	BMI	Hospitalization	Death due to SARS-CoV-2
F	55	PsA	Certolizumab pegol	29	No	No
F	57	RA, Sjogren's Disease	Etanercept, MTX	25	No	No
M	62	RA	MTX, HCQ	30	No	No
F	64	RA, Osteoporosis	HCQ	30	No	No
F	50	RA, Depression	MTX, CQ	33	No	No
M	51	PsA, Fatty Liver	MTX, leflunomide, adalimumab	26	No	No
F	57	RA	MTX, HCQ	28	No	No
F	41	PsA	MTX, adalimumab	51	No	No
M	58	RA	Etanercept	38	No	No
F	47	UCTD	No DMARDs	30	No	No
F	60	RA	MTX, HCQ	33	No	No
F	55	Discoid Lupus, Fibromyalgia	No DMARDs	27	No	No
F	70	SLE, Fibromyalgia,	MTX	29	No	No
F	68	Erosive Seropositive	Abatacept, MTX	30	No	No
M	52	Seropositive RA, Hyperuricemia	HCQ	31	No	No
M	59	Seropositive RA, Gout	Leflunomide, HCQ, Prednisone	45	No	No
M	56	AS	Apremilast, Sulfasalazine,	25	No	No
M	50	RA, Crohn's Disease	Ustekinumab, Colchicine,	33	No	No
F	64	RA	MTX, HCQ	23	No	No
F	48	AS	Secukinumab	29	No	No
F	76	RA	MTX, HCQ	35	No	No
M	55	AS	Etanercept	40	No	No
F	67	RA	SSZ, Prednisone	27	No	No
F	25	Early RA	No DMARDs	19	No	No
F	58	Sjogren's Disease	HCQ	31	No	No
M	67	Dermatomyositis, ILD	MMF, Prednisone	26	Yes	No
F	82	PsA	MTX, Secukinumab	32	Yes	No
F	58	RA	MTX	25	Yes	No
F	65	GPA, RA	RTX, MTX, Prednisone	19	Yes	No
F	63	RA	MTX	31	Yes	No
F	86	Gout, HTN, DM, CKD3, High BMI	No DMARDs	43	Yes	Yes

PsA, psoriatic arthritis; RA, rheumatoid arthritis; MTX, methotrexate, HCQ, hydroxychloroquine; CQ, chloroquine; UCTD, undifferentiated connective tissue disease; DMARDs, disease-modifying antirheumatic drugs; SLE, systemic lupus erythematosus; AS, ankylosing spondylitis, SSZ, sulfasalazine; MMF, mycophenolate mofetil; ILD, interstitial lung disease; GPA, granulomatosis with polyangiitis; RTX, radiotherapy; HTN, hypertension; DM, diabetes mellitus; CKD3, stage 3 chronic kidney disease; BMI, body mass index