Clinical features of patients with rheumatic diseases and COVID-19 infection in Sarawak, Malaysia

We read with great interest the article by Ye *et al*[1] describing the clinical features and outcomes of patients with rheumatic diseases and COVID-19 in Wuhan, China. It concluded that length of hospital stay and mortality were similar between patients with rheumatic diseases and non-rheumatic groups, while respiratory failure was more common in patients with rheumatic diseases infected with COVID-19. D'Silva *et al*[2] and Zhao *et al*[3] subsequently highlighted the differences of clinical severity and outcomes in their respective cohorts of patients with rheumatic diseases and COVID-19. Fredi *et al*[4] presented data from northern Italy which supported an association of elderly age and the presence of comorbidities with a poor outcome of COVID-19 infection, rather than the type of rheumatic disease or background medications. The Global Rheumatology Alliance[5] has recently published data of characteristics associated with hospitalisation for COVID-19 among patients with rheumatic diseases. We would like to share the clinical course of COVID-19 among patients with rheumatic diseases in Sarawak.

We reviewed the medical records of all the patients with rheumatic diseases diagnosed with COVID-19. Sarawak recorded 569 cases of COVID-19 with 17 deaths as of 24 June 2020.[6] The confirmation of the diagnosis of COVID-19 was based on positive reverse transcriptase PCR from the nasopharyngeal swab that detected severe acute respiratory syndrome coronavirus 2 from a nasopharyngeal swab specimen. There were four patients with rheumatic diseases among the 569 patients with COVID-19 (0.7%). There were two systemic lupus erythematosus (SLE), one dermatomyositis and one scleroderma. Patient 1 had stable SLE treated with hydroxychloroquine and sulfasalazine. She also had hypertension and obesity and she was a smoker. She was diagnosed with severe pneumonia, ventilated and subsequently succumbed to the disease. She was diagnosed with COVID-19 posthumously. Patient 2 was also a patient with stable SLE on hydroxychloroquine and azathioprine, and she developed an SLE flare at admission. Patient 3 was 80 years old with stable polymyositis on azathioprine. She also had diabetes mellitus. Patient 4 was 72 years old with systemic sclerosis not on any immunosuppressant. Her comorbidities were lung fibrosis, pulmonary arterial hypertension and a caecal malignancy which was resected 2 years prior. She recovered from COVID-19 infection and was discharged home; however, during a follow-up call it was discovered that she had died at home. All patients with rheumatic diseases had a stable disease prior to COVID-19 infection, and none of the patients were on glucocorticoids. Table 1 shows the clinical features of the patients with rheumatic diseases and COVID-19 infection.

When we reviewed the data of the 17 COVID-19 deaths from Sarawak, there were more men (10 patients) and more patients were aged below 65 years (12 patients). The most common comorbidities present among the patients who died were hypertension (six patients) and diabetes mellitus (five patients). One patient had congestive heart failure and one patient had chronic kidney disease. There was only one patient with rheumatic disease among the 17 COVID-19 mortalities in Sarawak. Although most publications quoted elderly age as a major risk factor for COVID-19 mortality, we are unsure of the reason there were more younger patients in our COVID-19 mortality cohort.

In conclusion, data from Sarawak showed a low proportion of patients with rheumatic diseases among the COVID-19 cases mirroring the findings by other authors. These findings seem to support that the presence of rheumatic disease does not affect the susceptibility of COVID-19 infection or mortality. The risk factor for COVID-19 mortality is the presence of comorbidities. Flare of rheumatic disease is possible during the COVID-19 infection. As more data are collected, we hope to have a clearer picture of rheumatic diseases and COVID-19.

Table 1 Patients with rheumatic diseases and COVID-19 infection, n=4

Clinical features	Patients, n (%)
Age >65	2 (50)
Gender	
Female	4 (100)
Male	0
Rheumatological diagnosis	
Systemic lupus erythematosus	2 (50)
Polymyositis	1 (25)
Systemic sclerosis	1 (25)
Comorbidities	
Smoking	1 (25)
Obesity	1 (25)
Hypertension	1 (25)
Diabetes mellitus	1 (25)
Lung fibrosis and pulmonary arterial hypertension	1 (25)
Malignancy	1 (25)
Flare of rheumatological disease	
Flare	1 (25)
No flare	3 (75)
Background rheumatological treatment	
Glucocorticoids	0
Hydroxychloroquine	2 (50)
Azathioprine	2 (50)
Sulfasalazine	1 (25)
Clinical features of COVID-19 infection	
COVID-19 pneumonia	3 (75)
Supplemental oxygen via nasal cannula	2 (50)
Ventilation	1 (25)
Treatment of COVID-19	
Steroids	4 (100)
Hydroxychloroquine	4 (100)
Lopinavir/ritonavir	3 (75)
Outcome of COVID-19 infection	
Alive	2 (50)
Death	
Death from COVID-19	1 (25)
Death from underlying rheumatic disease	1 (25)

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