Management of rheumatic diseases in the time of covid-19 pandemic: perspectives of rheumatology practitioners from India

With respect to observations by Monti *et al*,[1] a survey featuring 31 questions related to rheumatic diseases (RDs) during the covid-19 pandemic was administered to members of the Indian Rheumatology Association.

Of 861 invitees, 221 (25.7%; 92.7% adult rheumatologists, 52.2% academicians) responded. Most perceived the need for a change in the management of RDs (online supplementary files). Almost half (47.5%) reduced the usage of biological disease modifyinig anti rheumatic drugs (bDMARDs), whereas only 12.2% did so for csDMARDs (figure 1). Of the respondents, 66.5% were more inclined to initiate hydroxychloroquine (HCQ) in patients with borderline indications, whereas 14% disagreed with this approach. Nearly two-thirds (64.2%) were less inclined to change the major immunosuppressant (IS) for impending flare, with 58.3% deferring rituximab (RTX), followed closely by cyclophosphamide, antitumour necrosis factors (anti-TNFs), Janus kinase inhibitors (JAKinibs) and other bDMARDs. An earlier taper of glucocorticoids was preferred by 57.9% in inactive disease. There was lack of consensus on continuing IS infusions.

HCQ was preferred for treatment of covid-19 (81.9%), followed by protease inhibitors (22.17%) and intravenous immunoglobulin (IVIG) (8.14%). Chloroquine was less popular (19%). Almost three-fourths (70.5%) felt that covid-19 could cause macrophage activation syndrome (MAS) and preferred tocilizumab for its treatment (27.6%). Of the respondents, 22.6% advocated (and prescribed) HCQ prophylaxis, while 27.2% were unsure and 50.2% disagreed.

The most prevalent fears were transmitting covid-19 to family members, followed by patients getting infected and the physicians themselves getting infected.

Greater risk of viral activation has been described with RTX and JAKinibs, and thus reluctance in usage of bDMARDs and tsDMARDs is not unfounded. However, data are scarce on the specific risk of respiratory viral infections due to JAKinibs. While some have advocated the use of JAKinibs to inhibit cellular entry of covid-19, this might be successful at supratherapeutic doses, raising significant safety concerns.[2] However, data on risk of influenza with anti-TNFs are lacking. IVIG usage was favoured by a minority; however, it still merits consideration. Patients with RDs could possibly have a heightened risk, as sizeable numbers are elderly or have comorbid cardiac or lung disease.

Disease flares can potentially be induced by covid-19, as seen in RDs by most endogenous retroviruses as well as acquired viral infections.[3] While most rheumatologists believed that covid-19 may trigger MAS, it might be difficult to distinguish cytopaenia and hyperferritinaemia due to increased disease activity. The consensus was on the use of tocilizumab in MAS, backed by a case series which remains to be confirmed in ongoing trials.[4] The feasibility of screening for severe acute respiratory syndrome

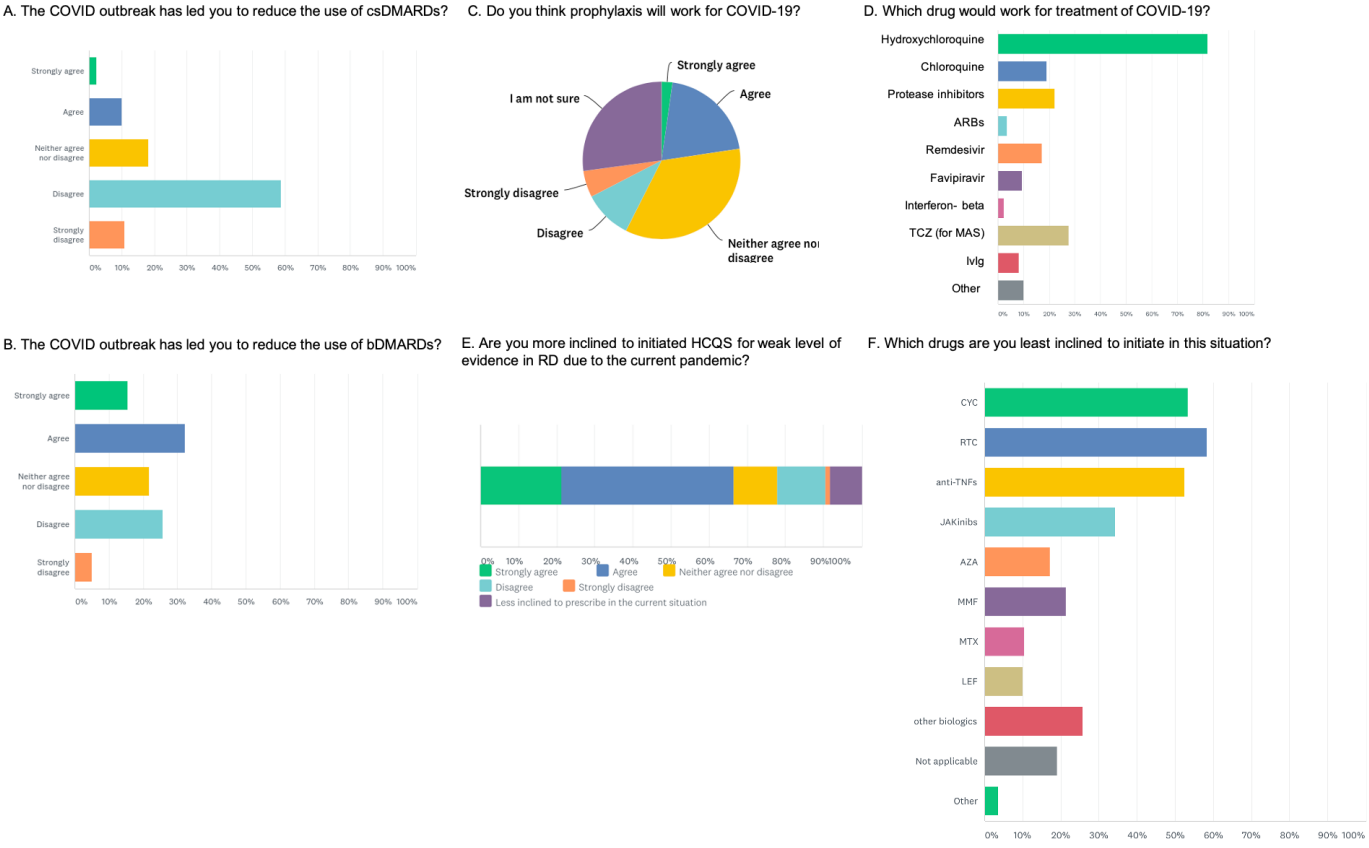

Figure 1 Opinion of rheumatologists on change in management of rheumatic diseases in the time of covid-19 pandemic. ARBs, angiotensin receptor blockers; AZA, Azathioprine; bDMARDs, biological disease modifying anti rheumatic drugs; csDMARDs, conventional synthetic disease modifying anti rheumatic drugs; CYC, cyclophosphamide; HCQ, hydroxychloroquine; IVIG, intravenous immunoglobulin; JAKinibs, Janus kinase inhibitors; LEF, Leflunomide; MAS, macrophage activation syndrome; MMF, Mycophenolate mofetil; MTX, Methotrexate; RD, rheumatic disease; RTX, Rituximab; TCZ, Tocilizumab; TNF, tumour necrosis factor.

Coronavirus-2 before initiation of bDMARDs needs to be explored as previously suggested.[5]

There was unanimous agreement on use of HCQ for treatment of covid-19, even in patients with otherwise low evidence base. This may be attributed to its safety profile, greater in vitro efficacy against covid-19 and greater experience with HCQ as rheumatologists. However, caution is needed as reports of toxicity have emerged with the use of prophylaxis.

The management of the connective tissue disorders spectrum of RDs is more likely to be changed, suggesting the need to develop evidence for a triage-in-rheumatology protocol bracing for the times ahead.

A strength of our survey was that 60% of the respondents had been in rheumatology practice for more than 5 years. Mhaskar *et al*[6] have reported 73% concordance between decision analysis driven by expert consensus and evidence gathered from randomised controlled trials. Considering the potential limitations of generating evidence in the face of a global crisis, it might be imperative to embark on a Delphi exercise to generate expert opinion, while data from covid-19 rheumatology registries in progress are awaited.

The present survey provides the viewpoint of a large number of rheumatologists and could shape future evidence-based opinions on managing patients with IS during the covid-19 pandemic.

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Correction notice This article has been corrected since it published Online First. Figure 1 has been replaced.

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