Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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POSTER ABSTRACTS

652.MULTIPLE MYELOMA AND PLASMA CELL DYSCRASIAS: CLINICAL AND EPIDEMIOLOGICAL

Safety and Tolerability of Sars-Cov-2 Vaccination and Natural History of Infection Among Patients with Castleman Disease

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Abstract Castleman Disease (CD) represents a group of rare and heterogeneous hematologic disorders that have common lymph node histopathology. Patients with CD are often immunosuppressed as a consequence of immunemodulating therapy or possibly due to an underlying immunologic dysfunction attributable to B-cell dysfunction. The most severe CD cases experience a cytokine storm disorder, a life-threatening exacerbation of circulating cytokines and immune-cell hyperactivation. Infection with SARS-CoV-2 progresses to a severe cytokine storm in the most severe cases of COVID-19. Interleukin-6 (IL-6) is central to the pathogenesis of CD, and increased IL-6 often accompanies severe COVID-19 cases; inhibition of IL-6 with monoclonal antibodies has been shown to be effective therapy for both CD and severe COVID-19. We therefore sought to understand the impact of COVID-19 infection on the natural history of CD and also examined the safety and tolerability of COVID-19 vaccines in this vulnerable patient population.

Patients enrolled in a longitudinal natural history study of CD (N=298) were invited to participate in a survey designed to characterize their experience with COVID-19 disease and vaccination. Surveys were emailed to all eligible patients, and reminders were sent up to 3 times. All data is self-reported; descriptive analyses are reported herein.

Of the 298 patients who received a survey, 101 (33.9%) completed it. Sixty-nine (68%) had been tested for SARS-CoV-2 at least once, and 10 (14.5%) reported testing positive - including 6 UCD, 3 iMCD, and 1 HHV8+ MCD patients. The reported prevalence of SARS-CoV-2 infection in the US compares at 10.5%. Two of the 10 patients reported asymptomatic disease (both UCD), 7 reported mild disease (4 UCD, 1 iMCD, 1 HHV8+MCD), and 1 reported moderate disease requiring hospitalization but not a ventilator or intensive care (iMCD). This severity distribution suggests that these potentially immunocompromised patients experience a range of disease severity consistent with SARS-CoV-2 infection in the broader US population. The most commonly-reported symptoms included fevers/chills, headaches, and loss of taste or smell (N=7 each), as well as shortness of breath/difficulty breathing, muscle and body aches, and cough (N=5 each). Rarer symptoms were also noted among the iMCD patients, including discoloration of skin, lips, or nailbeds (N=1) and newfound confusion (N=2). Two of the 10 patients reported stopping siltuximab treatment during their COVID-19 diagnosis; both subsequently resumed treatment. No other treatment changes were reported.

Of the 101 respondents, 87 (86%) had received at least 1 vaccine dose. Treatments, such as immunosuppressants and immunomodulators, were paused for 7 of these patients including, during the vaccination period; this was presumably done to increase the likelihood of a robust response to the vaccine. Fifty-one patients (59%) reported side effects to either dose 1 or 2. Side effects were generally mild, and none required hospitalization. Side effects were more commonly reported after dose 2, with the most common being arm pain (N=34), fatigue (N=30), and headache (N=26). Of those who reported not receiving the vaccine, 2 intend to receive it in the future, 5 reported being unsure about receiving it, and 7 do not intend to receive the vaccine. Common concerns include potential interaction with CD (N=9) and limited safety data (N=8).

This study represents the first investigation into the experience of CD patients with SARS-CoV-2 testing, diagnosis, and vaccination. We did not observe a markedly increased inflammatory response to SARS-CoV-2 infection, and vaccination was well-tolerated. A limitation is self-selection survey bias; it is possible that those who chose to participate represent those who

had a milder reaction in general. However, it is noteworthy that there were no reports of severe disease in this sample. The prevalence of confirmed SARS-CoV-2 infection in this cohort (14.5%) is marginally higher than reported in the US population (10.5%) but statistical comparisons were not performed given that this study does not provide a general epidemiological estimate. However, the distribution of symptoms and vaccine adverse effects in this sample were comparable to the general population. Though additional follow-up is planned for the future, these data are an important basis for understanding the interaction of SARS-CoV-2 and CD.

Disclosures Casper: *EUSA Pharma:* Consultancy. **Fajgenbaum:** *Pfizer:* Other: Study drug for clinical trial of sirolimus; *N/A:* Other: Holds pending provisional patents for 'Methods of treating idiopathic multicentric Castleman disease with JAK1/2 inhibition' and 'Discovery and validation of a novel subgroup and therapeutic target in idiopathic multicentric Castleman disease'; *EUSA Pharma:* Research Funding.

OffLabel Disclosure: Our abstract makes reference to the following: "Interleukin-6 (IL-6) is central to the pathogenesis of CD, and increased IL-6 often accompanies severe COVID-19 cases; inhibition of IL-6 with monoclonal antibodies has been shown to be effective therapy for both CD and severe COVID-19." Inhibition of IL-6 with monoclonal antibodies for use in COVID-19 is off-label.

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