



Reply to Comment on “Osteoporosis in the Age of COVID-19”

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We thank Dr Ibrahimagić and colleagues on comments made in reference to our article “Osteoporosis in the Age of COVID-19” [1].

Since the initial publication of our article in April, the COVID-19 pandemic rages on, the global death toll has exceeded 2 million, and healthcare systems continue to grapple with the urgent threat posed by this crisis while striving to maintain care for patients with chronic diseases, such as osteoporosis.

Dr Ibrahimagić and colleagues highlight the important and often neglected issue of nutrition in patients with osteoporosis. Nutrition, they suggest, might be a common link between osteoporosis, fractures, and susceptibility to COVID-19. Indeed, expert groups have highlighted the risk of vitamin D deficiency during the current pandemic as people avoid outdoor activities for fear of viral transmission (<https://www.asbmr.org/about/statement-detail/joint-guidance-on-vitamin-d-in-the-era-of-covid-19>). A growing body of literature has associated vitamin D deficiency with higher rates of COVID-19, and poorer outcomes [2]. As economies suffer considerable damage and livelihoods are lost, lack of food security is becoming a serious global problem at this time with significant potential impacts on skeletal health for years to come.

The authors specifically posit homocysteine as a potential link between osteoporosis and susceptibility to

COVID-19. Patients with homocystinuria, an autosomal recessive condition characterized by increased levels of plasma homocysteine, develop generalized osteoporosis. In the general population also, hyperhomocysteinuria is associated with osteoporosis and fracture, possibly via altered collagen cross-linking in bone [3]. Homocysteine has been examined as a biomarker for COVID-19 and a predictor of cardiac sequelae of this condition [4]. The authors suggest that strategies to normalize homocysteine levels may serve the dual purpose of preventing COVID-19 and reducing the risk of osteoporotic fracture in susceptible individuals. This is an interesting hypothesis and one the authors might consider examining in further detail. In the meantime, we reiterate our call that chronic diseases such as osteoporosis should not become an unintended casualty of the COVID-19 pandemic. A multifaceted approach to osteoporosis highlighting the role of nutrition for skeletal health remains of primary importance.

Declarations

Conflicts of interest None.

References

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