Add Vitamin D Supplementation

In view of the current pandemic situation, the very rapid but nonetheless thorough development of a guideline for inpatient treatment of patients with COVID-19 deserves praise (1). Although the “may be considered” treatment with remdesivir is no longer recommended by the World Health Organization, the recommendations should urgently be extended to include vitamin D supplementation. Recent results from a clinical-epidemiological study from Germany (2), a quasi-experimental study from France (3), and a randomized trial from Spain (4) showed consistently that patients with COVID-19 who have untreated vitamin D deficiency or insufficiency (who in this patient population are the rule, rather than the exception) have consistently been shown to be at more than 10 times the risk for a severe or fatal disease course than patients with a satisfactory vitamin D status or sufficient supplementation. Although the results of large randomized intervention trials are not yet available, in view of these data and the safety of vitamin D supplementation that has been established for several decades, this should no longer be withheld from COVID-19 patients. In the best-case scenario, in Germany alone this could help prevent thousands of severe COVID-19 courses and deaths as well as overloaded intensive care departments, at minimal expense. In the worst-case scenario, if the expectation of a massive reduction in severe COVID-19 courses is, against all expectation, not confirmed by the ongoing randomized trials, patients can still benefit from other positive effects of vitamin D supplementation that have been confirmed by randomized trials. On the background of a high prevalence of vitamin D deficiency and insufficiency in the groups at risk for severe COVID-19 courses, vitamin D supplementation for these risk groups is urgently advised, before they require inpatient treatment.

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References

In Reply:

Since the start of the pandemic just over a year ago, more than 100 000 scientific articles on COVID-19 have been published, according to PubMed. A multitude of hypotheses were formulated regarding therapeutic approaches. For our guideline we primarily restricted ourselves on randomized controlled trials that were undertaken in patients with COVID-19.

In the meantime the guideline has been updated again. Thanks to the collaboration with the COVID-19-Evidenzökosystem-Projekt (CEOsys, the COVID-19 evidence ecosystem project) important questions of therapeutic relevance were backed up by systematic evidence syntheses, which raises the quality to classification S3 (1).

Several randomized trials confirmed that treatment with systemic corticosteroids in severely and critically ill COVID-19 patients reduces mortality to a significant extent (1). In the largest published study, an absolute mortality reduction of 12% was achieved in invasively ventilated patients and 3% in patients requiring oxygen (2).

No difference was seen in patients who did not require oxygen therapy. The most unequivocal evidence exists for the substance dexamethasone, with a daily dose of 6 mg and a therapeutic duration of 10 days. Higher steroid dosages are currently not backed up by sufficient evidence, and the current guideline therefore includes no recommendation to this effect (3).

The optimal timing, dose, and duration of treatment remain, however, the subject of further studies.

Especially in severe cases of COVID-19, it has been observed that many patients had a low serum concentration of vitamin D3. However, the reverse conclusion, that the low vitamin concentration is the cause for the severe disease course, does not apply. The published randomized trials in hospital inpatients with COVID-19 showed no benefit for the administration of vitamin D3 compared with standard treatment as regards patient relevant endpoints (4).

On this background the guideline group articulated in the updated guideline a recommendation against vitamin D3 (1). Furthermore, German Nutrition Society does not make a blanket recommendation for vitamin D supplementation to reduce the risk of SARS-CoV-2 infection or the severity of the disease course of COVID-19 (www.dge.de/presse/pm/vitamin-d-und-covid-19/).

We agree with the explanations of Prof Gottlieb and colleagues regarding oxygen therapy. In general, hypoxemia should be prevented as much as hyperoxemia.

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References


On behalf of the authors
Prof. Dr. med. Stefan Kluge
Klinik für Intensivmedizin
Universitätsklinikum Hamburg-Eppendorf
skluge@uke.de

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Aspiration of an Instrument During Dental Treatment

A 56-year-old man was referred to the emergency department by his dentist. A 0.8 cm × 2.0 cm screwdriver had fallen into the patient’s throat during implant treatment and could no longer be located after swallowing and inspiration. The patient’s only symptom was a slight sensation of pressure in the laryngeal region, and clinical examination showed no abnormality apart from decreased breath sounds at the base of the right lung. Chest radiography (p.a. and lateral) showed the foreign body projected onto the right lower lobe bronchus (Figures 1 and 2). The object was removed without complications by means of fiberoptic bronchoscopy. This case shows that ingestion cannot be assumed even in a patient with mild symptoms. Diagnostic imaging is indicated to verify the location and, in the event of aspiration, perform bronchoscopic extraction. Aspiration of a foreign body during dental treatment is rare, according to data from France and Japan. However, given the amount of dental treatments performed in humans, it is the second most common cause, after aspiration events in children.

Dr. med. Doris Eis, MSc, Institut für Notfallmedizin, Universitätsspital Zürich, Schweiz, doris.eis@usz.ch

Dr. med. Fiorenza Gautschi, Klinik für Pneumologie, Universitätsspital Zürich, Schweiz

Dr. med. Sira Thiel, Institu für Notfallmedizin, Universitätsspital Zürich, Schweiz

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