

Facial Scars Due to Prone Position Pressure Ulcers: Underestimated Sequelae in COVID-19 Survivors?

Rutger M. Schols, MD, PhD; Melissa de Henau, MD; Carlo Colla, CPO; Eric van den Kerckhove, PhD; Stefania M.H. Tuinder, MD, PhD; René R.W.J. van der Hulst, MD, PhD; and Andrzej A. Piatkowski, MD, PhD

Aesthetic Surgery Journal
2021, Vol 41(11) NP1812–NP1813
© 2021 The Aesthetic Society.
This is an Open Access article
distributed under the terms of the
Creative Commons Attribution-
NonCommercial-NoDerivs licence
(<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which
permits non-commercial reproduction
and distribution of the work, in any
medium, provided the original work is
not altered or transformed in any way,
and that the work is properly cited.
For commercial re-use, please contact
journals.permissions@oup.com
DOI: 10.1093/asj/sjab251
www.aestheticsurgeryjournal.com

OXFORD
UNIVERSITY PRESS

Editorial Decision date: June 8, 2021; online publish-ahead-of-print June 12, 2021.

COVID-19 disease, caused by the SARS-CoV-2 virus, can result in acute respiratory distress syndrome (ARDS). A treatment option commonly employed in COVID-19 patients experiencing ARDS is application of prone positioning to improve oxygenation in the case of mechanical ventilation. Long-term prone position leads to a decrease in mortality.¹ When applying prone position, one must, however, be aware of the potential side effects of this treatment, such as pressure ulcers. Prone position pressure sores have previously been described in ARDS patients but recently also in COVID-19 patients. Facial pressure ulcers occur mostly at the level of the bony structures, including the chin and the cheekbone.²

In our multidisciplinary outpatient clinic dedicated to scar treatment, we recently observed an increasing number of COVID-19 survivors presenting with facial scars following long-term prone position ventilation during ICU admittance. We aim to raise awareness for the potentially underestimated sequelae—such as stigmatizing facial scarring—of COVID-19 survivors. To illustrate this, we included 2 cases.

A 67-year-old female was referred to our outpatient clinic in January 2021 with a scar on the left mandible (Figure 1). Nine months earlier (April 2020), she was admitted in the ICU for a severe COVID-19 pneumonia, complicated with bilateral pulmonary embolism, tracheostomy, and critical illness neuropathy. She had undergone multiple prone position mechanical ventilation sessions. Although precautions were taken to pad pressure points, this unfortunately resulted in a facial pressure ulcer on

the left cheek bone. After discharge to a rehabilitation center in July 2020, she presented at our scar clinic. Next to reduced physical fitness, there were signs of mental and psychological problems. The facial scar reminded of the past events and aggravated mental distress. Initial scar management comprised of a silicone gel sheet. This concerns a basic treatment. In case of deterioration of the scar (eg, in terms of thickness and surface), more extensive therapy is possible, for example, utilizing a custom-made transparent facial pressure mask with silicone inner liner.³

A 56-year-old male presented in September 2020 with a hypertrophic scar on the chin (Figure 2). He suffered from a pressure sore due to long-term prone position mechanical ventilation for a severe COVID-19 pneumonia, complicated with bilateral pulmonary embolism, septic shock, and tracheostomy. He was admitted to the ICU in April 2020 and discharged to a clinical rehabilitation center 2 months later. At the aftercare clinic, he presented with ongoing fatigue but without evident signs of mental or psychological problems. He was, however, extremely displeased with the

From the Department of Plastic, Reconstructive and Hand Surgery, Maastricht University Medical Center, Maastricht, the Netherlands.

Corresponding Author:

Dr Rutger M. Schols, Department of Plastic, Reconstructive and Hand Surgery, Maastricht University Medical Center, P. Debyealaan 25, 6229 HX Maastricht, the Netherlands.
E-mail: rutger.schols@mumc.nl



Figure 1. This 67-year-old female patient was referred to our outpatient clinic in January 2021 with a hypertrophic scar on the left mandible.

scar on his chin. Serial combined therapy of triamcinolone and verapamil injections were performed with already satisfying effect.⁴

It is indisputable that prevention of pressure sores is essential, but when they occur, facial pressure sores can develop into disfiguring scars and may require dedicated scar treatment.⁵ Moreover, their long-term consequences need to be evaluated, especially in the COVID-19 population. Considerable psychiatric morbidity and poor quality of life have been reported in hospitalized COVID-19 survivors in the short term.⁶ It has yet to be seen if these impacts persist over the long term and may be aggravated by visible facial scars.

Facial scars, as one of the sequelae of the current pandemic, might incorporate a social stigma and also have a negative impact on patients' quality of life in terms of post-traumatic stress disorder. Therefore, we underline the attention for the reported observation. Last but not least, we think it makes sense to inform health insurance companies of this as well in order not to limit reimbursements for scar corrections in this patient population.

Disclosures

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.



Figure 2. This 56-year-old male presented in September 2020 with a hypertrophic scar on the chin.

Funding

The authors received no financial support for the research, authorship, and publication of this article.

REFERENCES

1. Ghelichkhani P, Esmaeili M. Prone position in management of COVID-19 patients; a commentary. *Arch Acad Emerg Med.* 2020;8(1):e48.
2. Ibarra G, Rivera A, Fernandez-Ibarburu B, Lorca-García C, Garcia-Ruano A. Prone position pressure sores in the COVID-19 pandemic: the Madrid experience. *J Plast Reconstr Aesthet Surg.* 2020; S1748-6815(20):30732-30734.
3. Kant SB, Colla C, van den Kerckhove E, Piatkowski de Grzymala A. Clinical effects of transparent facial pressure masks: a literature review. *Prosthet Orthot Int.* 2019;43(3):349-355.
4. Kant SB, van den Kerckhove E, Colla C, Tuinder S, van der Hulst RRWJ, Piatkowski de Grzymala AA. A new treatment of hypertrophic and keloid scars with combined triamcinolone and verapamil: a retrospective study. *Eur J Plast Surg.* 2018;41(1):69-80.
5. Nazerali RS, Song KR, Wong MS. Facial pressure ulcer following prone positioning. *J Plast Reconstr Aesthet Surg.* 2010;63(4):e413-e414.
6. Méndez R, Balanzá-Martínez V, Luperdi SC, et al. Short-term neuropsychiatric outcomes and quality of life in COVID-19 survivors. *J Intern Med.* 2021. doi:[10.1111/joim.13262](https://doi.org/10.1111/joim.13262) [Epub ahead of print].