Facial Pressure Ulcers in a COVID-19 50-year-old Female Intubated Patient

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Abstract

Keywords
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In case of severe acute respiratory distress syndrome (ARDS), as in coronavirus disease 2019 (COVID-19) affected patients, the invasive ventilation in prone position can improve the prognosis, albeit with an increased risk of facial pressure ulcers. In this report, we will relate a case of facial pressure ulcers in a SARS-CoV-2 positive 50-year-old woman with the aim to describe the high-complexity management of COVID 19 in which healthcare professionals across the world are still involved.

Introduction

The worldwide diffusion of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is characterized by various clinical presentations and different related complications.

Controlling the airways often requires mechanical invasive ventilation,1 and in cases of severe acute respiratory distress syndrome (ARDS), prone positioning of the patient can reduce mortality.2 At the same time, however, the prone position ventilation can increase the risk of facial pressure ulcers.3

We report a case of facial pressure ulcers in a 50-year-old female, mechanically ventilated in a prone position, who was hospitalized for COVID-19.

The aim of this article is to contribute a little to better define the treatment complexities of the COVID-19 pandemic, in which healthcare professionals across the world are still involved.

Case Report

On March 10, 2020, a suspected 50 years-old female SARS-CoV-2 positive patient was admitted to the Emergency Department of the SS. Antonio and Biagio and C. Arrigo Hospital.

Clinical signs were fever, asthenia, and dry cough. In the previous 3 days, the patient had taken acetaminophen and antibiotics (amoxicillin and clavulanic acid 1 g three times per day), as prescribed by the practitioner. The patient also experienced diarrhea and cramp-like pain for 2 days before being admitted.

The patient’s medical history was irrelevant, and no allergies were reported.

Vital parameters at the admission were: body temperature (BT) 38.8°C, blood pressure (BP) 120/65 mm Hg, heart rate (HR) 95/min, and respiratory rate 20/min. Pulse oximeter saturation was 87%.

The physical examination was aspecific.

The laboratory findings revealed lymphopenia (lymphocytes 0.47 x 1000/mcl), elevated LDH (943 U/l), AST (75 U/l), ALT (200 U/l), GGT (41 U/l), procalcitonin (0.89 ng/mL), PCR (9.37), fibrinogen (596 mg/dl), and D dimer (1.00 mcg/mL).

With regard to radiological examinations, a chest CT showed peripheral consolidations and ground-glass opacities in both lungs. The SARS-CoV-2 positive nasopharyngeal swab confirmed the suspected diagnosis.

The patient was promptly intubated and transferred to a single room of the Intensive Care Unit of our hospital; ventilation was applied in a prone position.

After 15 days of intensive care, a plastic surgery evaluation was requested for multiple facial skin lesions. We observed pressure ulcers and skin lesions due to maceration involving...
the lips, chin, perioral area, both cheeks, left zygomatic
region, and superior and inferior left eyelids (Fig. 1).

The patient was evaluated by using all the required drop-
let and contact precautions. The sequence for putting on
and taking off of personal protective equipment (PPE) was
respected. Some pictures of the clinical case were taken by
using a camera previously covered with adhesive film. As far
as the dressing was concerned, we suggested the application
of topical 1% Silver Sulfadiazine (Sofargen-Sofar), covering
the wounds with gauzes impregnated with 0.2% Hyaluronic
Acid And Sodium Salt (Connettivina-Fidia Farmaceutici s.p.a)
and sterile gauzes. On the necrotic tissue on the eyelids and
left zygomatic area, our dressing prescription was hyaluronic
acid sodium salt collagenase ointment (Bionect Start-Fidia
Farmaceutici s.p.a) twice per day.

One week after the first plastic surgery evaluation, the
patient clinical conditions worsened and a tracheostomy
was performed. However, skin lesions improved (Fig. 2).
At the time of the article’s submission, the patient is still
hospitalized.

Discussion
As reported by the Italian Ministry of Health, on April 2
at 5 pm in Italy, there are 85388 SARS-CoV-2 positive
patients, 4068 of whom have been currently hospitalized
in intensive care units in Italy, and 452 in Piedmont. Given
the aggressive pulmonary involvement associated with
COVID-19, noninvasive or invasive oxygen therapy is often
required. On the basis of the potential risk of viral aerosoli-
sation and the need for careful isolation precautions, nonin-
vasive ventilation may be insufficient to manage COVID-19
induced respiratory failure. Moreover, there may be a poor
response to noninvasive ventilation. Invasive ventilation is
associated with reduced aerosolisation and is thus consid-
ered safer for staff and other patients.

As reported in the literature, prone ventilation is likely to
reduce mortality among patients with severe ARDS when
applied for at least 12 hours daily. However, the prone
position increases the risk of medical device-related pressure
ulcers in the facial area.

Despite the great effort made by all the healthcare pro-
fessionals involved in the COVID 19 pandemic management,
pressure ulcer preventive measures should be implemented.
As suggested in the literature, a thin silicone foam dressing
can represent a valid precaution approach. The frequent
mobilization of the patients is mandatory to reduce the risk
of facial pressure ulcers and avoid any cicatricial or perma-
nent discromatic effect. In this case, the suggested topical
treatment promoted wound healing.

Fig. 1 Facial skin lesions after 15 days prone ventilation.

Fig. 2 Outcome after topical treatment.
Conclusion

This is the first report regarding facial pressure ulcer in COVID-19 affected patients. Considering the high number of hospitalized patients in intensive care units, it is of paramount importance to be aware of all the COVID-19 related complications with the aim to avoid possible discomfort of patients.

Conflicts of Interest

The authors declare no conflict of interest.

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