

Letizia Fumagalli^{1,2}, Agnese Carra^{2,3}, Denise Magri^{2,3}, Ilenia Mariconti^{2,3}, Stefania Napoli^{2,3}, Giuseppe Foti^{1,2}, Marta Villa^{1,2}, Alberto Lucchini^{1,2}

- (1) Fondazione IRCCS San Gerardo dei Tintori, Via Pergolesi 33, Monza, Italia.
(2) Università degli Studi di Milano-Bicocca, Piazza dell'Ateneo Nuovo, 1, Milano, Italia.
(3) ASST Ospedale Papa Giovanni XXIII, Piazza OMS, 1, Bergamo, Italia.

BACKGROUND

Helmet Continuous Positive Airway Pressure treatment in COVID-19 patients inside and outside of intensive care unit settings was a feasible support during the pandemic outbreak. The available literature suggests interventions to increase the comfort, tolerance, and endurance of patients undergoing Helmet CPAP. Few studies are available on the experiences of patients undergoing this treatment. **AIM:** this study aimed to explore the experiences, views and recollections of COVID-19 patients who needed Helmet-CPAP support.

METHODS

Qualitative study performed through semi-structured interviews with thematic analysis. Participants were recruited from the follow-up program, for COVID-19 patients discharged from an Italian general Intensive Care unit. Twenty-four participants were interviewed by telephone, reaching the saturation of data. Data analysis followed the principles of thematic synthesis approach.

FINDINGS

Two themes and six subthemes were generated from the analysis of the recorded interviews:

1. "THE HELMET CPAP AS A LIFESAVING TREATMENT"; subthemes:

- Recognition of the usefulness of treatment: "it had positive effects on my health" (participant nr.19, male), "it saved my life" (interview nr.16);
- Resilience: "Thanks to the helmet, I'm here, I'm alive and I can talk with you" (participant nr.16, male)

2. "THE NEGATIVE FEELINGS RELATED TO HELMET CPAP APPLICATION";

subthemes:

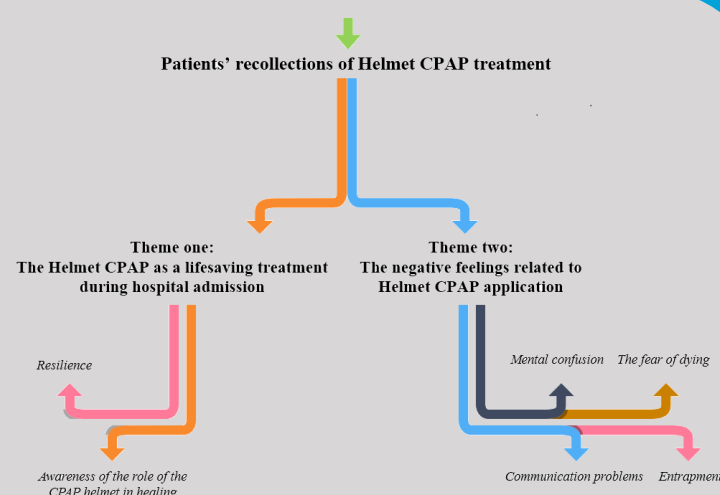
- Communication problems: "The helmet was bulky and the noise didn't make my voice heard" (participant nr. 15, male);
- Entrapment: "I felt too closed..." (participant nr.19, male);
- Mental confusion: "When I entered the ICU I asked myself if I was in heaven because I saw everything blue..." (participant nr.14, male);
- The fear of dying: "When they put the helmet on me I thought I was going to die..." (participant nr.2)

Each patient's experience was unique, but some discomfort elements such as noise, gas flow turbulence, choking sensation and thirst were very common.

CONCLUSIONS

Helmet CPAP treatment determined positive and negative memories and feelings in COVID-19 patients during the pandemic. The patients' experiences provided an overview of the main factors of discomfort. This can be a starting point for taking corrective measures to promote greater helmet tolerance and subsequent treatment success.

RELEVANCE TO CLINICAL PRACTICE: This study has provided an insight into the patient's recollections about Helmet CPAP treatment during a worldwide pandemic. The findings suggests the need of a strictly applications of interventions aimed to reduce some negative factors that participants reported, to improve their compliance to the CPAP support. Results from this study could help in developing future care bundles for patients undergoing Helmet CPAP.



communication
flow
helmet
noise
thirst



letizia.fumagalli@irccs-sangerardo.it



Fondazione IRCCS
San Gerardo dei Tintori

Sistema Socio Sanitario



Regione
Lombardia

General Adults and Pediatric ICU & ECMO centre
ASST Monza – Fondazione IRCCS San Gerardo dei Tintori
Emergency Department – Director : Prof. Giuseppe Foti

University of Milano-Bicocca
www.mastermonza.com

