

Vrste i načini primene kiseonične terapije kod kritično obolelih pacijenata od bolesti Kovid-19

Types and Methods of Application of Oxygen Therapy in Critically Ill Patients COVID-19

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Apstrakt

Svetska zdravstvena organizacija je proglasila pandemiju Kovid-19 2. marta 2020. godine. Krajem 2019. godine u Vuhanu, provinciji Hubei u Kini, kao uzročnik virusne pneumonije identifikovan je novi koronavirus (SARS-CoV-2), a bolest je nazvana kovid-19.

Radi se o respiratornom virusu i najveći broj obolelih će imati lakšu kliničku sliku. Procenjuje se da će između 15 i 20% pacijenata zahtevati hospitalizaciju, od kojih će, prema različitim podacima, 10 – 20% pacijenata zahtevati intenzivno lečenje.

Zbog velikog broja pacijenata, kao i kritično obolelih, kriterijumi za prijem u jedinice intenzivnog lečenja (JIL) su prilagođavani trenutnom stanju i raspoloživim resursima. Ova pandemija je umnogome promenila način oksigene terapije kod kritično obolelih kovid pacijenata. Najčešće primenjivane metode oksigene terapije su:

1. kiseonička maska,
2. nazalni kateter,
3. high flow ventilacija,
4. neinvanzivna ventilacija pomoću maske (full face, total face),
5. invanzivna mehanička ventilacija.

Započinjanje oksigene terapije se uglavnom dešava na kovid odeljenjima i prema protokolima usvojenim u poslednje 2 godine, i to najčešće nazalnim O₂ kateterima, a kasnije prema kliničkoj slici uvode se druge metode. U JIL primenjuju se, uglavnom, invanzivnije procedure: high flow ventilacija, neinvanzivna ventilacija pomoću maske (full face, total face), invanzivna mehanička ventilacija.

Najveći napredak u terapiji sigurno je primena high flow ventilacije. Ona se primenjuje preko posebnih aparata za high flow ili respiratora koji imaju tu mogućnost u svom programu. Kiseonik se doprema do pacijenata preko ovlaživača, kao i grejača, i širokih nosnih kanila. Započinjanje sa high flow ventilacijom zavisi od kliničke slike pacijenata, arterijskih gasnih analiza i drugih vitalnih parametara.

UKC Kragujevac je opremljen velikim brojem respiratora, kao i high flow mašina. U talasu 01. 11. 2020 – 01. 06. 2021. imali smo 653 pacijenta u JIL, od čega su na MV-315 (48%), HF-604 (92,4%), NIV-158 (24%).

Abstract

The World Health Organization declared the COVID-19 pandemic on the 2nd of March, 2020. At the end of 2019 in Wuhan, Hubei Province in China, as a cause of viral pneumonia a new coronavirus (SARS-CoV-2) was identified, and the disease was named COVID-19. It is a respiratory disease, and most patients will have milder clinical manifestations. It is estimated that between 15 and 20% of patients will require hospitalization, of which, according to various data, 10-20% of patients will require intensive treatment.

Due to a large number of patients as well as severely ill patients, the criteria for admission to Intensive Care Units (ICUs) have been adjusted to the current situation and available resources. This pandemic has greatly altered the mode of oxygen therapy in critically ill COVID patients. The most commonly used methods of oxygen therapy are:

1. Oxygen mask
2. Nasal catheter
3. High flow ventilation
4. Non-invasive ventilation with a mask (full face, total face)
5. Invasive mechanical

Initiation of oxygen therapy mainly occurs in COVID-19 wards and according to the protocols adopted in the last 2 years, most often with nasal O₂ catheters, and delays according to the clinical manifestation, other methods are introduced. In JIL, mainly invasive procedures of High flow ventilation, non-invasive ventilation with a mask (full face, total face), and invasive mechanical ventilation are applied.

The greatest progress in therapy is certainly the application of high-flow ventilation. It is applied through special high-flow apparatus or respirators that have this capability in their program. Oxygen is delivered to the patient through humidifiers as well as heaters and wide nasal cannulas. The onset of high flow ventilation depends on the patient's clinical picture, arterial gas analysis, and other vital parameters.

University Clinical Center Kragujevac is equipped with a large number of respirators as well as High flow machines. In the wave from the 1st of November, 2020 to the 1st of June, 2021 we had 653 patients in ICU of which MV-315 (48%), HF-604 (92.4%), NIV-158 (24%).