

## ■ Neinvazivna mehanička ventilacija u jedinici intenzivne kardiološke skrbi – naša iskustva

### Non-invasive mechanical ventilation at cardiology intensive care unit – our experience

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Modeli mehaničke ventilacije bolesnika mogu biti invazivni i neinvazivni.<sup>1,2</sup> Neinvazivna mehanička ventilacija je oblik ventilacije pri kojemu se respiratorna podrška ostvaruje na razini gornjih dišnih puteva bez invazivnih postupaka poput endotrahealne intubacije ili traheotomije. Postupci neinvazivne ventilacije se mogu koristiti na različite načine uporabom specijalnih ventilacijskih maski koje pokrivaju cijelo lice ili samo područje usta i nosa. Na ovaj način postiže se aktivno sudjelovanje bolesnika u procesu disanja i to bez sedacijske potpore, dok se istodobno smanjuje rizik od infekcije te ozljeda dišnog sustava. Pacijent ujedno lakše komunicira, a zdravstvena njega je jednostavnija. Međutim, postoje kontraindikacije za upotrebu ovog modela ventilacije kao što su kardiorespiratorni arrest, hemodinamska nestabilnost, nesuradljivost bolesnika, pojačana sekrecija dišnog sustava, ozljede lica, pneumotoraks te operacije gornjeg dijela gastrointestinalnog sustava. Zadaci medicinske sestre u prvom redu odnose se na nadzor vitalnih funkcija i respiratornog statusa bolesnika te praćenje općeg stanja. Ujedno je važno pratiti laboratorijske rezultate te na vrijeme reagirati u slučaju promjena.

U ovom radu prikazat ćemo složenost zbrinjavanja 37-godišnjeg pacijenta liječenog zbog plućnog edema uz primjenu neinvazivne mehaničke ventilacije.

Mechanical ventilation can be invasive and non-invasive. Its purpose is to enhance gas exchange and it helps de-stress respiratory muscles.<sup>1,2</sup> Non-invasive mechanical ventilation is a form of mechanical ventilation in which the respiratory support spans throughout the upper airway without invasive procedures such as intubation or tracheotomy. NIMV can be used in different ways, but CCU establish using full face mask or the oronasal mask. NIMV pros: active participation of the patient in the breathing process without the need for sedation, decreased choices of infection and the development of avoiding trauma, easier implementation of health care and easier communication.<sup>1,2</sup> There are also contraindications for NIMV use such as: cardiorespiratory arrest, hemodynamic instability, disturbance of consciousness and patient noncompliance, increased secretion of the respiratory system, face traumas, pneumothorax, fresh upper gastrointestinal tract operation. Nurse role is continuous surveillance of the vital functions, respiratory status as well as the general condition of the patient. It's also important to monitor the lab results and reacting on the time if they change.

In this research we will present the complexity of the taking care of a patient on NIMV on an example of a 37-year-old female patient diagnosed with pulmonary edema.

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#### LITERATURE

1. Farha S, Ghamra ZW, Hoisington ER, Butler RS, Stoller JK. Use of noninvasive positive-pressure ventilation on the regular hospital ward: experience and correlates of success. *Respir Care.* 2006;51(11):1237-43. PubMed: <https://www.ncbi.nlm.nih.gov/pubmed/17067405>
2. Sumner K, Yadegafar G. The utility and futility of non-invasive ventilation in non-designated areas: can critical care outreach nurses influence practice? *Intensive Crit Care Nurs.* 2011;27(4):211-7. DOI: <http://dx.doi.org/10.1016/j.iccn.2011.04.002>