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Paper Title:	An airflow pattern in oronasal masked and nasal masked in NIV patient
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Abstract

In patient who has respiratory failure, an artificial ventilation or controlled ventilation by using automatic mechanical ventilator is commonly used. Fresh air from ventilator can be applied to patient lung by invasive or noninvasive technic. In noninvasive technics, patient is connected to ventilator by using mask interfacing. Most NIV mask is oro-nasal mask or nasal mark in which head strap must be fixed tightly to prevent air leak. In oro-nasal mask, air can flow into both mouth cavity and nose cavity which nasal mask is only nose cavity. However, in nasal mask interfacing, patient can communicate, eating and air leakage is easier to control. In this research, we try to investigate an air pattern of both NIV mask by using a FEM simulation and comparative study air velocity in trachea and esophagus. As a preliminary, a simple oro-nasal and nasal mask model are created in 2D domain with focusing on an airflow pattern, velocity profile. The simulation results show that some air volume in both model fill into stomach which can be implied from air velocity value. For the further, an air volume can be clearly estimated through 3D study especially when left-right lung and stomach compartment are added into the near future study.