Material/Methods: We retrospectively reviewed the medical records of patients who were admitted consecutively to the emergency department with CO intoxication. Patients were divided into 2 groups: patients treated with HFNC and patients treated with conventional face mask (CFM). Demographic data, pretreatment, and control (after 1 hour) arterial blood gas analyses values of the patients were evaluated.

Results: Sixty-eight patients (mean age 35.8±18.7 years) were included in this study. NBO was given via HFNC to 38 patients (55.9%), and via CFM to 30 patients (44.1%). The demographic characteristics and pretreatment values of carboxy-hemoglobin (COHb) were similar in the 2 groups. The mean COHb value of the HFNC group at the first hour was found significantly lower than the CFM group: 9.5±4.7 and 12.0±5.1, respectively (P=0.041). Improvement of COHb level was significantly higher in the HFNC group compared to the CFM group: 12.5±4.5 versus 6.7±3.7, respectively (P=0.001).