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Role of End-Tidal CO<sub>2</sub> Monitoring in Patients Intubated and Resuscitated in the Emergency  
Department

Özgür KARCIOĞLU<sup>1</sup>  
Yasemin KARCIOĞLU<sup>2</sup>

<sup>1</sup>Department of Emergency Medicine, Faculty  
of Medicine, Dokuz Eylül University, İzmir,

<sup>2</sup>Department of Anesthesiology, Social  
Security Hospital, İzmir-Turkey

 [Keywords](#)  
 [Authors](#)



[medsci@tubitak.gov.tr](mailto:medsci@tubitak.gov.tr)

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**Abstract:** Objective: We examined the reliability of end-tidal CO<sub>2</sub> (ETCO<sub>2</sub>) level in predicting mortality after endotracheal intubation in emergency situations. Methods: In this prospective study, the reliability of ETCO<sub>2</sub> monitoring in the emergency setting as a useful predictor of outcome was investigated in 36 adult patients with pending cardiopulmonary collapse. The cardiopulmonary resuscitation (CPR) procedure was performed as usual and the cardiac rhythm, arterial O<sub>2</sub> saturation, non-invasive blood pressure and ETCO<sub>2</sub> levels were continuously monitored in all the patients. Results: Patients with an ETCO<sub>2</sub> concentration below 0.5% had significantly lower rates of survival. The sensitivity and specificity values of end-tidal CO<sub>2</sub> levels equal to or greater than 0.5% in predicting survival were 100% and 42.8%, respectively. None of the 8 patients with levels below 0.5% survived. An end-tidal CO<sub>2</sub> concentration level of 0.5% served to discriminate between survivors and non-survivors. Conclusions: These results suggest that the initial ETCO<sub>2</sub> concentration can be an important predictor of outcome, especially with regard to mortality in patients undergoing endotracheal intubation.

**Key Words:** End-Tidal CO<sub>2</sub>, Monitoring, Mortality, Cardiopulmonary Resuscitation

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