

## **INCIDENCE OF LIFE-THREATENING AIRWAY COMPLICATIONS AND PROGNOSTIC FACTORS OF HEAD-AND-NECK CANCER PATIENTS IN MEDICAL ICU**

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**BACKGROUND/AIMS:** To investigate the incidence of life-threatening airway complications and prognostic factors of critically ill head-and-neck cancer (HNC) patients in the medical ICU (MICU).

**METHODS:** We reviewed 57 HNC patients in a tertiary-care MICU between January 1999 and December 2005. Factors associated with 30-day mortality were evaluated by multivariate regression analysis.

**RESULTS:** Of the 57 patients with HNC, 86% were male and the mean age was  $60.6 \pm 12.0$  years. The most common sites of HNC were the nasopharynx (54.4%), tongue (17.5%) and hypopharynx (12.3%). More than half (56.1%) of them had advance cancers (stage III/IV) and 36.8% had uncontrolled (i.e. recurrent or progressive) cancers before ICU admission. The most common reason for ICU admission was acute respiratory failure (ARF) (47/57, 82.5%), most of which was due to pneumonia (38.3%), cancer-related life-threatening airway complications (25.5%, including 8 with upper airway obstruction and 4 with tumor bleeding) and sepsis (8.5%). Difficult endotracheal intubation was encountered in 23.4% (11/47) of patients with ARF and 72.7% (8/11) of them required emergency tracheostomy. The mean APACHE II score was  $19.6 \pm 8.3$ , the mean ICU stay was  $9.2 \pm 7.6$  days, and the 30-day mortality rate was 38.6%. Multivariate analysis showed the following were risk factors for 30-day mortality: uncontrolled HNC (adjusted OR, 4.13; 95%CI, 1.14-14.92) and APACHE II score (adjusted OR 1.13; 95%CI, 1.04-1.22).

**DISCUSSION/CONCLUSIONS:** About one fourth of critically ill HNC patients with ARF had cancer-related life-threatening airway complications, which usually required emergency tracheostomy. Short-term outcome was favorable and associated with cancer status and APACHE II score.

**Key words:** Head and neck cancers, critically ill, outcome.