

Acoustic Respiratory Rate Monitoring in A Patient with a Tracheostomy: A Case Report

Toda Y., Morimatsu H., Hayashi M., Shimizu K., Morita K. *Masui*. 2014 Feb;63(2):161-3. [Article in Japanese]

Acoustic respiratory rate (RRa) monitoring has been validated for patients after general anesthesia and has been shown to be a useful technique. However, its feasibility in patients with a tracheostomy has not been assessed yet. Successful monitoring of RRa in a patient with a tracheostomy is described in this case report.

A 56-year-old male patient was scheduled for cranioplasty after severe subarachnoidal hemorrhage under general anesthesia. A tracheostomy tube had been placed in the patient because of airway obstruction and altered spontaneous breathing. The acoustic sensor was placed at the usual position and RRa was successfully monitored by Rad 87 (Masimo Corp., Irvine). Statistical analysis was made for comparison of respiratory rate determined by RRa monitoring with respiratory rate visually counted by intensive care nurses.

There was no statistically significant difference between the two respiratory rates ($P = 0.82$). RRa monitoring is useful even in patients with a tracheostomy.