
English Session

[EngO1]English Session1

Chair: Sungwon Na (Department of Anesthesiology and Pain Medicine, Yonsei University College of Medicine, Korea)

Fri. Mar 1, 2019 9:00 AM - 10:00 AM 第11会場 (国立京都国際会館1F Room C-2)

[EngO1-5]Utility of continuous monitoring and visualizing system for respiratory sounds

Kazuya Kikutani, Shinichiro Ohshimo, Shingo Ohki, Hiroshi Giga, Satoshi Yamaga, Takuma Sadamori, Nobuaki Shime (Department of Emergency and Critical Care Medicine, Graduate School of Biomedical & Health Sciences, Hiroshima University, Japan)

【ライブ配信】

Introduction

Respiratory sounds provide a useful indicator for evaluating abnormalities in the upper airways and lungs. However, the accurate, objective, and continuous evaluation of respiratory sounds remains difficult. To overcome this problem, we have developed a novel, continuous monitoring and visualizing system for respiratory sounds. We herein present two cases in which respiratory disorders were detected promptly and objectively using this system.

Results

Case 1.

A 23-year-old man with chronic graft-versus-host disease after bone marrow transplantation developed refractory anorexia. A magnetic resonance imaging scan demonstrated pontine demyelination. Tracheal intubation was planned because of progressing consciousness disorder, bradypnea, and hypercapnia. The patient showed no features of difficult airway or tracheal stenosis, but suddenly became unable to be ventilated or intubated after administering a muscle relaxant. We immediately carried out a cricothyrotomy and the patient survived. Continuous monitoring of respiratory sounds clearly demonstrated stridor, suggesting an upper airway obstruction and subsequent apnea, before the physicians became aware of the patient's status due to his clinical signs.

Case 2

A 74-year-old woman with tracheal burn injury had been intubated for 7 days. Extubation was performed after verifying improved laryngeal edema with laryngeal fibers. Although her respiratory sounds just after extubation were normal, the patient gradually developed inspiratory stridor and was re-intubated due to post-extubation laryngeal edema. Continuous monitoring of the patient's respiratory sounds clearly identified the serial change from normal respiratory sounds to stridor before the physicians were aware of the post-extubation laryngeal edema based on her clinical signs.

Conclusion

Continuous patient monitoring and visualization for respiratory sounds may aid the prompt identification of respiratory complications.