

# Extubation failure

Extubation failure is defined as inability to sustain spontaneous breathing after removal of the artificial airway; an endotracheal tube or tracheostomy tube; and need for reintubation within a specified time period: either within 24-72 h.

The aim of a study was to analyze the clinical impact of [extubation](#) failure (EF) in with good grade [subarachnoid hemorrhage](#) (SAH), in which a good clinical course is usually expected.

Wojak et al., reviewed the clinical data from 141 patients with [SAH](#) and i. initial Hunt & Hess grade 1-3 ii. induction of [general anesthesia](#) for intervention and iii. the presence of data about the functional outcome. Patients were divided into three groups: 1. Primary tracheotomized patients (PT), 2. Patients with successful extubation (ES) and 3. Patients with EF (reintubation within 48 h).

EF occurred with a rate of 0.12. The leading cause of EF was respiratory insufficiency (n=7), followed by impaired consciousness (n=5). Multivariate logistic regression did not show any neurological predictor of EF. Patients with ES showed an excellent outcome after 6 months (favorable outcome: 95.7 %), whereas the outcome of EF and PT patients was significantly ( $p<0.05$ ) poorer. The case fatality rate was non-significantly higher in the EF group (0.15 vs 0.03). Hospitalization was significantly reduced for patients with ES, while the occurrence of symptomatic cerebral vasospasms and vasospastic cerebral infarction was similar between Patients with EF, ES or PT.

They showed that EF is a frequent condition in good grade SAH, but is not predictable using common neurological parameters. Regarding the functional outcome, they were able to show that the result of an extubation trial clearly delineates the patients in two distinct groups, in which ES predicts an excellent outcome <sup>1)</sup>.

<sup>1)</sup>

Wojak JF, Ditz C, Abusamha A, Smith E, Gliemroth J, Tronnier V, Küchler J. The impact of extubation failure in patients with good-grade subarachnoid hemorrhage. World Neurosurg. 2018 Jun 13. pii: S1878-8750(18)31242-7. doi: 10.1016/j.wneu.2018.06.027. [Epub ahead of print] PubMed PMID: 29908380.

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