Early extubation

Early extubation was defined as removal of the endotracheal tube within one hour after skin closure. If time to extubation was more than one hour after skin closure, it was defined as late extubation [1].

Early termination of anesthesia and early extubation is, of course, mandatory for a thorough neurological examination. Today most neurosurgical patients are awakened directly postoperatively in the OR for clinical assessment. Still, some institutions—at least within Europe—prefer a delayed extubation with parameter focused monitoring on the intensive care unit (ICU) over an early extubation in the OR with clinical-neurological monitoring of the awakened patient.

Early extubation immediately after elective cranial procedures may expose the patient to potential risks such as respiratory, metabolic and hemodynamic changes, pain, nausea and vomiting [2] [3] [4] [5] and might increase the rate of seizures. However, our data show that early endotracheal extubation of patients after non-emergency craniotomy is feasible, safe, and does not increase perioperative morbidity or mortality. The safety and feasibility of early extubation after infratentorial craniotomy has been previously reported [6].

Postoperatively extubated and responsive patients can be more closely monitored at a highly specialized intermediate care unit or ICU. Successful early extubation in the OR has been shown to be highly predictive for an uneventful postoperative period [7].

Early extubation of patients in the OR after elective craniotomy procedures is safe and does not increase the rate of urgent surgical interventions or patient mortality. With this regime, routine early postoperative computerized tomography for detection of postoperative complications in conjunction with a normal neurological examination is not justified. CT scanning in the early postoperative period should be reserved for patients with unexpected neurological findings. Failure to extubate within one hour after skin closure should be considered “unexpected” and is predictive for postoperative complications leading to urgent neurosurgical intervention. Therefore unintended, delayed extubation (>1 hour) should serve as an indicator for obtaining an urgent head CT [8].

[1] , [8]
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