

題名:神經外科術後病患呼吸器策略之應用Ventilator Strategy in Neurosurgery Patients

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摘要:頭部外傷術後約有40-65%的病患發生肺炎，意識評分(Glasgow coma scale, GCS)小於8分的患者有20%發生急性肺損傷，同時需要連續使用呼吸器24小時超過31%。頭部外傷患者需經歷長時間的腦部手術，手術期間需接受高濃度的氧氣吸入與長時間的全身麻醉。而且，手術完成後，為避免腦壓過高，病患會接受至少為期數天鎮定劑的使用，這些過程會導致肺部塌陷，這些不穩定的肺泡最易造成機械性通氣導致急性肺損傷，或急性呼吸窘迫症候群等合併症之發生。TBI病患術後多數採用過度換氣，高潮氣容積低吐氣末正壓避免腦壓過高，但高容積可能導致肺泡容積傷害，低PEEP可能導致塌陷損傷，加重肺傷害。過去採用高潮氣容積與低的吐氣末正壓達到過度換氣模式，但也可利用中低的潮氣容積與高的呼吸次數，來維持相同的每分鐘換氣量。PEEP的應用對TBI的病患，目前尚無清楚的定論。因此本文獻回顧為主要探討呼吸器策略對腦神經術後病患之應用。

Pulmonary complications are common after brain injury, occurring in up to 80%. Acute lung injury has been reported in 20% of TBI (traumatic brain injury) patients with a postre suscitative Glasgow Coma Score < 8 and in 31% of the those requiring mechanical ventilation for more than 24h. Neurosurgery patients was received general anesthesia, wich promotes atelectasis formation. these atelectrauma can contribute to acute lung injury (ALI/ARDS). Hyperventilation by high tidal volume and low peep has been widely used in the treatment and prevention of rise ICP. but, the strategy may further exacerbate the pulmonary inflammatory response in patients with ALI/ARDS. An attractive alternative in the early phase after brain injury to guarantee tight CO2 control may be the use of different ventilator

strategies based on moderate/lower tidal volume and high rate to obtain similar minute ventilation. Application of PEEP has long been controversial in the management of brain injury patients, This article reviews the current evidence for the ventilator strategy in neurosurgery patients.