신경집중치료의 침습적 모니터링

전 상 범
서울아산병원 신경과

Invasive Monitoring in Neurocritical Care

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The mainstay of the invasive neuro-monitoring in critical care is measurement and interpretation of intracranial pressure (ICP) and cerebral perfusion pressure (CPP). ICP is the pressure exerted by the brain, blood, and cerebrospinal fluid (CSF) in the rigid intracranial vault. CPP is a major factor that affects cerebral blood flow (CBF). It is determined by calculating the difference between mean arterial pressure (MAP) and ICP (CPP = MAP-ICP). CPP can therefore decrease as a result of decreased MAP, increased ICP, or a combination of both. CPP is proportional to CBF as long as diameter of cerebrovascular structures and its resistance remain constant. Optimal CPP values have not been clearly established, but 50-60 mmHg is generally accepted as the minimum pressure required to prevent further brain injury. Individualization of optimal MAP and CPP may be available when pressure reactivity index (PRx) is calculated. PRx is a moving correlation coefficient of MAP and ICP. In this presentation, the author will introduce how clinicians measure and interpret ICP, CPP, and PRx.

Key Words: Intracranial pressure, Cerebral perfusion pressure, Mean arterial pressure

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