CLINICAL
INVESTIGATION

Short Note on Neurosurgical Anesthesia

Submitted: 03 June 2021; Accepted: 17 June 2021; Published online: 25 June 2021

Jennifer Stewart*

Editorial Office, Clinical Investigation, London, UK

*Author for correspondence: clinicalinvest@escienceopen.com

Editorial Note

Neurosurgical anesthesiology is a specialisation of anesthesiology that focuses on the anaesthetic management of patients suffering from diseases of the Central Nervous System (CNS), which includes the brain and spine. Since the late 1960s and early 1970s, the field has advanced significantly, with the capacity to quantify Intracranial Pressure (ICP), Cerebral Blood Flow (CBF), and Cerebral Metabolic Rate (CMR). In the context of intracranial hypertension and marginal cerebral perfusion, anaesthetic procedures must be changed. Furthermore, several neurosurgery procedures necessitate patient positions (e.g., sitting, prone), which complicate care even further. The principles acquired in this chapter are applied to the anaesthetic management of neurosurgical patients in this chapter. A prolonged increase in Intracranial Pressure (ICP) above 15mm Hg is defined as intracranial hypertension. Intracranial hypertension can be caused by an increasing tissue or fluid mass, a depressed skull fracture compressing a venous sinus, insufficient CSF absorption, or excessive CSF. There could be a number of elements at play. Tumours in the posterior fossa, for example, are frequently associated with cerebral edema and mass impact, as well as obstructing CSF outflow by compressing the fourth ventricle (obstructive hydrocephalus).

Journal of Clinical Investigation gives the month to month 3 types of anaesthesia are:

1. The patient is completely unconscious and has no sensations. A patient can take medicine orally or through an IV.
2. Local anaesthetic keeps the patient conscious during the procedure. To numb a limited area, medicine is injected.
3. Regional anaesthesia is a type of anaesthesia in which the patient is conscious but parts of his or her body are sleeping. Medicine is injected into the body.

Obtaining a clear description of how these agents behave is difficult due to two issues. The first is that, unlike most medicines used in medicine, volatile anaesthetics bind to their auction site(s) only very weakly. Another issue is that volatile anaesthetics prefer to partition into lipids and interact with proteins in a lipid milieu to exert their principal effects on synaptic neurotransmission. The use of genetic methods has yielded encouraging results in the study of the molecular basis of the anaesthetic effect. Researchers can, for example, change the functions of individual proteins to see whether they can link them to anaesthetic susceptibility or resistance in lower creatures. The simple answer to the question "How does anaesthesia work?" is that, while we know a lot about the physiologic effects and macroscopic locations of action for general anaesthetics, we still don't know the molecular mechanism(s) of action. Many of the instruments needed to address these questions are now available, and we may expect to learn more about how this wonderful blessing to humanity operates at the molecular level.