The Baby Bear's Chair in Goldilocks Principle: When A Little Is Too Excessive

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Geriatric patients, previous stroke and oversedation during anaesthesia have been associated with higher risks of morbidity, especially postoperative cognitive dysfunction (POCD) (1). We present a case of intraoperative cerebral monitoring (IOCM) to guide anaesthesia in a high-risk patient to minimise morbidity and improve outcomes. An 80-year-old lady with a recent stroke involving the left anterior, middle and posterior cerebral territories and complete heart block on a dual chamber pacemaker was planned for total abdominal hysterectomy and bilateral salphingo-oophorectomy for a suspicious ovarian malignancy. Her Glasgow Coma Scale (GCS) was E4V1M5 and was fully cared-off in a nursing home. Pre-anaesthetic assessment, counselling and optimisation were done, and her pacemaker was interrogated before surgery. Utilising standard monitoring, cerebral oximeter and processed electroencephalogram (pEEG) strip, we proceeded with intravenous induction and anaesthesia was maintained with Desflurane 2% to achieve minimum alveolar concentration (MAC) of 0.3. Despite the low MAC, the pEEG showed suppression ratio of 14 with a patient state index of 22 (Fig. 1). The patient underwent surgery uneventfully and was given bilateral rectus sheath block. She was extubated postoperatively to the same GCS level and discharged home without any POCD. Elderly, previous stroke and oversedation are risk factors for POCD. IOCM consisting of pEEG and cerebral oximetry have been used to minimise the risks and secondary insult to preexisting stroke (2-3). If managed routinely without intracerebral monitoring, this patient would possibly be oversedated with anaesthetics leading to POCD and prolonged hospital stay. IOCM is beneficial for titrating and optimising anaesthetic care for a fast-track recovery.

Keywords: Intraoperative monitoring, electroencephalography, cerebral oximetry, postoperative cognitive dysfunction, postoperative recovery

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