

All's well that ends well - breaking the spell of post-operative delirium in a severely neurologically handicapped patient

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CLIN. SITUATION

We present a 76-year old lady admitted for ECCE with black cataract in her right eye. She is deaf and lives in the care of her deaf sister and a nurse. Having suffered intrapartum hypoxia she is neurologically significantly handicapped. On five previous occasions when operated on her eyes, she has become violently delirious. Three out of five occasions delirium started with emergence, the other two times during the night post-op. Agitation after ECCE of the other eye led to iridal herniation (see picture) Patient does not tolerate iv-lines being placed and she was given benzodiazepines as pre-medication before being anaesthetised every time. Apart from benzodiazepines, high doses of Fentanyl and Propofol were administered during GA for fear of violent movements.

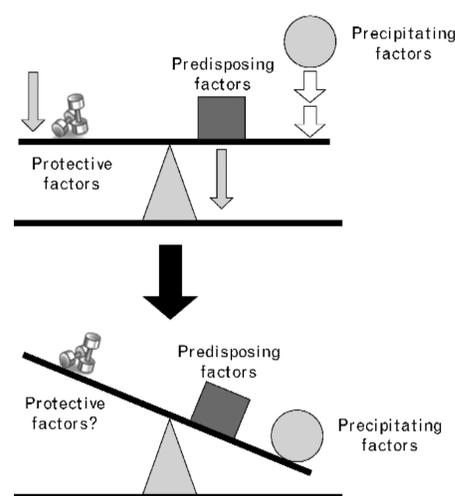


ANAESTHESIA

Patient is Sevoflurane-induced in hospital-bed with sister and personal nurse holding her hands. IV-line inserted and anaesthesia deepened with Dexmedetomidine bolus 0.3 µg/kg body weight and 1 mg Propofol /kg/BW. Laryngeal mask is placed and Narcotrend-frontal EEG monitoring taken up. **No opioids administered** but „no-snip-sub-Tenon's“ **block** given to right eye. Maintenance on 0.2 µg/kg/h Dexmedetomidine stopped after lens extraction and Propofol infusion guided by EEG-signal (High-delta power). Examination and ECCE-surgery proceed uneventful, after stopping Propofol infusion, patient immediately takes up spontaneous breathing and wakes up sufficiently to be extubated 10 min after cessation of Propofol-infusion. Post-surgical care is calm, 4 hours after end of intervention patient leaves hospital for home accompanied by sister and nurse.

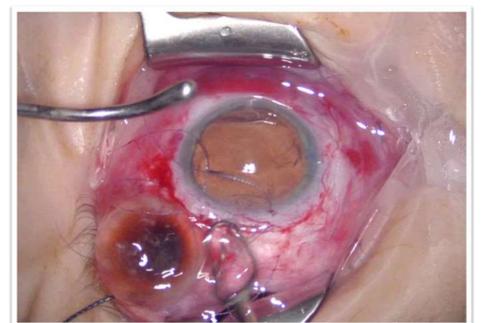
DISCUSSION

Whilst the patient factors (age, co-morbidities, dementia etc.) leading to the result „post-operative delirium“ can't be altered, reflection on what to change in the „anaesthesia package“ (delirogenic substances, anaesthesia depth etc.) might lead to improved outcome. The presented case may not only show that forgoing benzodiazepine and opioid administration in the frail elderly but also customizing the depth of anaesthesia according to EEG-signals and tampering emergence and post-operative neuronal overshoot with Dexmedetomidine can lead to better results in post-operative care.



CONCLUSIONS

As in our pilot study this case demonstrates the beneficial effects of opioid-sparing and benzodiazepine-omitting GA strategies. Especially the oldest ophthalmic patients with preexisting cognitive dysfunction and dementia seem to benefit from breaking the potential vicious cycle: “pre-existing dementia – therefore GA – post-operative delirium”. Whilst the use of EEG-monitoring in ophthalmic surgery may be considered overly complicated it seems to help define planes of unconsciousness in which patients can be safely operated on and from which they can be brought back to unperturbed consciousness. Further research in studies better designed than our retrospective analysis needs to be undertaken to corroborate these communicated trends.



LITERATURE

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