craniotomy in a patient with obstructive sleep apnea with a BMI of 22, Smith et al. [1] described HFNC use in a morbidly obese patient for awake craniotomy with BMI 45. The presented case is the first of an awake craniotomy in a patient with super obesity and high-risk obstructive sleep apnea managed successfully with HFNC. Super obesity, classified as BMI >50, or weight >225% of ideal body weight, poses an increased perioperative risk of complications and increased cost of care, even vis-à-vis morbid obesity (BMI >40) [11–13]. Awake craniotomy can be extremely challenging due to increased sensitivity to respiratory depressant effects of opioids and anesthetics [14], obstruction of the airway due to obstructive sleep apnea [15] and make them unviable for intraoperative testing that requires patience and cooperation. Use of HFNC in these patients can enable greater respiratory reserve and delaying invasive airway manipulation to maintain oxygenation. This allows the surgeon to test sensorimotor, language and memory function while resectioning lesions close to an eloquent cortex, improving quality of recovery and reducing perioperative morbidity [6]. This is even more important for lesions involving the dominant cerebral hemisphere, which is usually the left side and was the case in this patient. Intraoperative language and memory testing could not have been performed if the patient was under general anesthesia, leading to suboptimal outcome. The use of HFNC allowed prevention of invasive airway management which would have rendered testing non-viable, and also did not interfere with voice during language testing despite high flow rates. The patient remained comfortable and did not complain of any dryness and sore throat perioperatively. Higher flows delivered through HFNC could also be beneficial in cases of an emergency during awake craniotomy, e.g. an intraprocedural seizure, as it reduces the risk of desaturation and improves the apneic oxygenation time, allowing prevention of escalation of respiratory support and adds more time for airway management in suboptimal conditions [6–8]. The present patient had a baseline PaO₂ of 64 mm Hg with

PaCO₂ of 51 mm Hg, which improved with use of HFNC to PaO₂ of 179 mm Hg, and PaCO₂ of 45 mm Hg by the end of the surgery. Temporal lobectomy was performed in this patient using HFNC without invasive airway management while testing and preserving language and memory, with uneventful seizure-free recovery. Sedation was used to make the patient more comfortable during the procedure and is the standard of care in this and other centers. The drug options for intraoperative seizures were propofol, midazolam and phenytoin as needed. Asleep-awake-asleep craniotomy is another approach for awake craniotomy; however, airway management in super morbidly obese patients in a lateral position with the head in pins is always challenging due to an expected difficult airway. The aim was to keep the patient comfortable enough to tolerate the procedure. Consciousness itself becomes a monitor and a safeguard against e.g. aspiration, which will otherwise not be possible with inducing general anesthesia. Asleep-awake-asleep craniotomy with airway adjuncts, such as Proseal laryngeal mask airway (Teleflex Medical Europe Ltd, Westmeath, Ireland) as plan B, or initial endotracheal intubation with extubation at testing and supra glottic airway for the period after testing as Plan C were the other choices for the conduct of anesthesia; however, these were reserved as back-up plans which were eventually not needed, leading to a faster discharge from the PACU.

Conclusion

Use of HFNC oxygen therapy is a safe modality for carrying out an awake craniotomy in a super obese patient, avoiding more invasive methods of airway management, potentially reducing time to discharge from PACU, which should be explored in future studies.

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Compliance with ethical guidelines

Conflict of interest S. Banik, A.G. Parrent and R.R. Noppens declare that they have no competing interests.

For this article no studies with human participants or animals were performed by any of the authors. For images or other information within the manuscript which identify patients, consent was obtained from them and/or their legal guardians.

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Erratum zu: Erreger, Resistenzmechanismen und etablierte Therapieoptionen bei Infektionen durch multiresistente Erreger

Erratum zu:

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Im ursprünglich veröffentlichten Beitrag wurden 2 Antibiotikumdosierungen in Tab. 1 falsch angegeben. Korrekt muss es in Tab. 1 „Therapieoptionen bei Infektionen durch Methicillin-resistente Staphylokokken (MRSA)“ bei den „Skin and soft tissue infections“ (SSTI) heißen:

Oritavancin

Dosierung: Tag 1: 1,2 g einmalig

Dalbavancin

Dosierung: Tag 1: 1 g und Tag 8: 0,5 g

oder Tag 1: 1,5 g einmalig

Wir bitten, den Fehler zu entschuldigen.

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