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Commentary on "Awake craniotomy with dexmedetomidine during resection of brain tumours located in eloquent regions"

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Dear Editor,

We read with great interest the recent study "Awake craniotomy with dexmedetomidine during resection of brain tumours located in eloquent regions" presented by Lechowicz-Głogowska *et al*. [1] and the method used to perform awake craniotomy (AC) in the authors' centre. Although AC is considered as a gold standard of management during resection of intra-axial lesions in proximity to eloquent cortical and subcortical regions, until now a uniform consensus on anaesthetic management has not been established, as the authors rightly pointed out. Therefore, we would like to acknowledge and congratulate the authors for their effort to perform the study on such an interesting and still uncommonly used anaesthetic technique.

Proper selection of patients for elective AC in conscious sedation (CS) is a key factor determining the success of the whole procedure. After reading the article we would like to raise a few issues concerning selection criteria and the standard of the AC procedure presented by the authors which need clarification.

Although the authors stated that the selection criterion for the operation was a good neurological status of the patient (unfortunately "good neurological status" was not defined precisely), data presented in Table 1 show that there were also people in the study group who were graded 13 points on the Glasgow Coma Scale (GCS) scale. We have some doubts whether it was possible to explain the details of the operation to patients with such a low score and to ensure that the special requirements for the intraoperative interaction between the patient and the medical team were properly and reliably understood by the patient.

We have further doubts about selecting for ACs under CS patients with severe obesity, anticipated difficult airway, and severe respiratory (lung tumour compressing the aorta) and cardiovascular comorbidities. In our opinion, such patients meet the criteria for a predicted anatomical and physiological difficult airway, and in the context of restricted access to the patient, emergency airway management would be extremely challenging. The risk of severe complications related to airway management (including death and brain damage) was outlined in the excellent British NAP4 study, which showed the significance of proper identification of patients at risk of difficult airway and the need for advance planning to reduce the risk of a fatal outcome [2].

In Table 2, the authors indicate that they encountered four difficult intubations in 15% of operated patients but did not explain the reasons for instrumentation on the airways. We also noticed that some patients were operated on in positions that could pose additional difficulties with access to the airways, if needed.

According to the information found in the article there was a group of patients who were operated on in

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a prone position. Postoperative survey carried out in our centre revealed that one third of patients who were operated on in conscious sedation in a neutral or lateral position complained about discomfort. We expect that staying in a prone position during lengthy (over 6 hours) procedures may be challenging for a conscious patient [3].

We strongly agree with the authors' opinion that dexmedetomidine can be an excellent choice in AC surgery but have some concerns about the choice of less controllable midazolam and oxycodone as a supplement to sedation and analgesia.

We agree with the authors that further studies are needed to confirm the best and safest anaesthetic protocol for awake craniotomy.

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