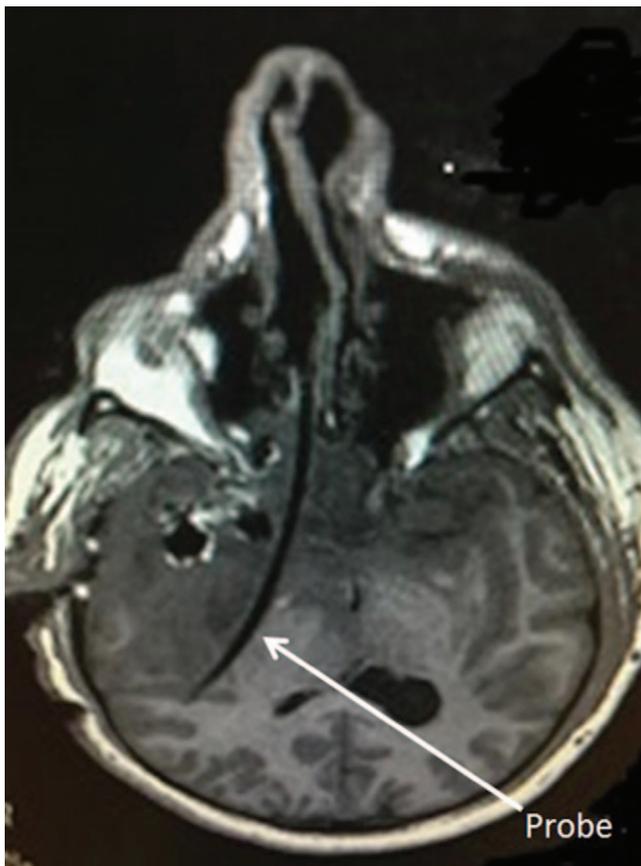


Images in Anesthesiology: Intraparenchymal Temperature Probe on Intraoperative Magnetic Resonance Imaging

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A 26-YEAR-OLD patient with a right frontal oligoastrocytoma extending into the sphenoid sinus was brought to the operating room for definitive resection. During intraoperative magnetic resonance imaging, a linear hypointense structure was seen extending through the right sphenoid sinus intracranially. This was identified as the temperature probe and was promptly removed.

Although the patient suffered no neurologic sequelae, this figure depicts what could have been a dramatic incident after a routine insertion of a temperature probe. Perioperative monitoring of temperature has been established as a critical component of anesthetic practice.¹ This unique magnetic resonance imaging-compatible temperature probe was inserted nasally on the operative side and found to have migrated through the sphenoid sinus into the brain parenchyma. The STB Probe (LumaSense Technologies, USA) is of a more rigid material than the typical probes used to monitor temperature in a nonmagnetic resonance imaging, operating room setting. Placement of the nasopharyngeal probe on the mucosa of the upper or midportion of the nasopharynx is optimal to measure the accurate brain temperature as it is in close proximity to the internal carotid artery. The approximate distance from the nares to the upper nasopharynx is 10 cm.² This complication may have been avoided if proper technique of insertion² had been used and most importantly if the practitioner had avoided the

placement of any device on the operative side as confidence in the integrity of normal and abnormal tissues wanes in the settings of cancer and surgical intervention.

Competing Interests

The authors declare no competing interests.

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References

1. <http://www.asahq.org/~media/Sites/ASAHQ/Files/Public/Resources/standards-guidelines/standards-for-basic-anesthetic-monitoring.pdf>. Accessed October 15, 2015
2. Lee J, Lim H, Son KG, Ko S: Optimal nasopharyngeal temperature probe placement. *Anesth Analg* 2014; 119:875–9

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