An Incidental Perioperative Finding of Wolff-Parkinson-White Syndrome in Pediatric Patient

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BACKGROUND

- Cardiac arrhythmias are a frequent perioperative event (60-70%), but only 1.6% require treatment.

- Arrhythmias during anesthesia may be manifestations of undiagnosed cardiac pathology, such as in Wolff-Parkinson-White (WPW) syndrome.

- We present a pediatric patient, who was found to have WPW syndrome following episodes of cardiac arrhythmias during general anesthesia.

CASE SUMMARY

A 9 year old male was scheduled for fenestration and drainage of a temporal lobe cyst under general anesthesia.

He had a six month history of blurry vision, headaches, and an atrophied optic nerve. Past medical history was notable for the parent’s report of having “a hole in the heart” as a baby. He did not require cardiology follow up since he was two years old.

The patient’s pre-induction ECG on the OR monitor showed normal sinus rhythm. During inhalational induction with sevoflurane, he had several episodes of ectopic beats, which were followed by two episodes of wide complex tachycardia, lasting 40 and 20 seconds each. The patient was hemodynamically stable during the arrhythmias, and spontaneously converted to sinus rhythm. The remainder of intraoperative course was uneventful. The patient was extubated in the OR and transferred to the Pediatric Intensive Care Unit.

A 12 lead EKG was obtained in PICU, and showed shortened PR interval, widened QRS complex and delta waves, consistent with WPW syndrome. The patient was referred to the cardiology service for further follow up.

DISCUSSION

- The arrhythmia potential is increased compared to baseline in patients with WPW syndrome while under general anesthesia.

- Perioperative sympathetic stimulation, light planes of anesthesia, laryngoscopy, hyperventilation, and hypothermia can unmask and accentuate arrhythmias in an undiagnosed WPW syndrome.

- Work-up of perioperative arrhythmias should be done to rule out dangerous anomalies of the conduction system.

REFERENCES

References: