BACKGROUND

The Oculocardiac Reflex

The oculocardiac reflex (OCR) is a well recognized phenomenon for patients undergoing strabismus surgery. OCR is elicited via traction on the ocular muscles or pressure on the globe, resulting in:

- Bradycardia
- Dysrhythmias
- Sinoatrial arrest

Release of stimulus is often effective in abating the response.

Incidence in strabismus surgery is reported as high as 79% (1).

CASE PRESENTATION (CONT.)

PACU Course

- After emergence, our patient was transported to PACU with pulse oximetry monitoring, and his rhythm was noted to be irregular.
- Arrival to PACU – 8:56am – 2nd Degree AV Block, Mobitz Type 1 (Wenckebach)
- Asymptomatic
- HR 81, BP 109/73
- EKG ordered

- PACU monitor – 9:05am – 1st Degree AV Block
- HR 85, BP 112/82
- EKG performed – 9:09am – 1st Degree AV Block, HR 85bpm, PR interval 298ms
- Cardiology consulted

- PR interval normalized on monitor
- HR 98
- Asymptomatic
- Exam unremarkable
- Cardiology Differential:
  - Activation of neuro-cardiac axis
  - Medication related
  - No further workup needed

CARDIOLOGY evaluation 9:45

- PR interval normalized on monitor
- HR 98
- Asymptomatic
- Exam unremarkable
- Cardiology Differential:
  - Activation of neuro-cardiac axis
  - Medication related
  - No further workup needed

DISCUSSION

The OCR typically results in sinus bradycardia, but other dysrhythmias such as AV block have been observed, usually during traction to ocular muscles.

Differential for etiology of AV block:

- Oculocardiac reflex
- Suture traction
- Hematoma formation
- Pain
- Medication related effect
  - Dexmedetomidine
  - Other medications

- Dexmedetomidine has been shown to decrease sinus and AV nodal function (2), but AV block was not temporally related to administration in this case.
- Dexmedetomidine use does not appear to increase incidence of intraoperative OCR (3).

Anesthesia providers should have heightened awareness for possible cardiac arrhythmias that may occur not only during strabismus surgery, but also in the immediate post-operative period.

REFERENCES


