**Surgical Goals:**
- Percutaneous removal of the pencil in the CT suite with immediate post-procedural imaging
- Wound exploration in the OR with assessment of CSF leak
- Possible craniotomy

**Anesthetic Concerns:**
- Risk of hemodynamic instability in a remote location
- Risk of significant sudden intracranial bleed with mass effect
- Need for invasive monitoring
- Possible cranietomy

**Anesthetic Management**
- Intravenous induction with fentanyl, propofol, and rocuronium in the OR
- Additional access obtained (3 large bore IVs)
- A radial arterial line placed
- Patient connected to a rapid fluid infuser with immediate blood availability
- Transferred to the CT scanner with IV propofol infusion
- The pencil was removed with immediate re-imaging
- Bradycardia noted during procedure, treated with atropine
- No intracranial bleed noted on head CT
- Back to the OR for I&D and closure of the wound
- Long-term effect: Right visual loss

**Discussion:**
Our case demonstrates the complexity of non-operating room procedures where anesthesiologists face novel challenges. Individualized approach, teamwork, and communication are necessary components of a successful anesthetic in the OR but even more so in areas where lack of support may be detrimental to patients.

**Pre-operative Assessment:**
- Healthy 9 y.o. boy who sustained a penetrating injury to the right orbit.
- Vital signs within normal limits.
- Physical exam:
  - Foreign body embedded in space between right eye and nose, superior to the right bicanthal plane.
  - Mild proptosis and conjunctival injection noted on the right eye.
  - Absent light perception and extraocular movements on the right.

**Imaging:**
- CT angiogram of the head:
  - Foreign body in the medial right orbit, through the superior orbital fissure.
  - Pencil enters the cranium along the right temporal lobe. Right globe is intact.
  - No midline shift or extra-axial fluid collection.

**Orbital Cranial Trauma**
- Close relation to the lateral margin of the right internal carotid artery.
- No intracranial hemorrhage, however, possible tamponade effect masking vascular injury.

**Non-Operating Room Anesthesia**

<table>
<thead>
<tr>
<th>Challenges:</th>
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<tbody>
<tr>
<td>Unfamiliar environment</td>
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<td>Limited working space</td>
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<td>Limited lighting</td>
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<td>Lack of temperature control</td>
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<td>Electrical interference with monitors</td>
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<td>Inaccessible skilled personnel (anesthesia techs), pharmacy, and supplies</td>
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<td>Unfamiliarity of ancillary staff with the management of anesthetized patients</td>
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<td>Field avoidance</td>
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<td>Transportation of critically ill patients</td>
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<td>Post-procedure care plan</td>
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**Risks According to the Closed Claims Analysis:**
- Death
- Permanent brain damage
- Nerve damage
- Respiratory event
- Inadequate oxygenation/ventilation

**References:**