TAMING THE TIGER: SEDATION WITH REMIFENTANIL AND MIDAZOLAM FOR A FIVE LEVEL VERTEBROPLASTY – A CASE REPORT

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Please confirm that an ethics committee approval has been applied for or granted: Not relevant (see information at the bottom of this page)

Background and Aims Percutaneous vertebroplasty (PV) is a minimally invasive procedure for treating vertebral compression fractures. It may be done simultaneously to several vertebrae and these are often described under general anaesthesia. However, sedoanalgesia can be an effective alternative in cases where anaesthesia poses higher risks.

Methods A 55-year-old female with osteoporotic vertebral fractures from T11 to L3 with severe chronic lower back pain was proposed for PV. She had a history of autoimmune hepatitis waiting liver transplantation and Crohn’s disease. PV was performed under remifentanil perfusion (0.15mcg/kg/min), midazolam bolus (1mg) and skin infiltration with lidocaine.

Results The patient remained comfortable with stable vital signs and adequate pain relief. The use of remifentanil and midazolam provided effective sedoanalgesia, allowing successful completion of the five-level vertebroplasty with fast recovery. This case report highlights the feasibility and safety of analgesia of short-acting opioids even when combined with benzodiazepines for vertebroplasty and in patients with advanced chronic liver disease.

Conclusions Analgesia with remifentanil for procedural sedation may be considered in selected cases, particularly for patients who are not suitable for general anaesthesia or intolerant to other sedatives, such as those with severe chronic liver disease. It may reduce procedure time, improve patient comfort and decrease recovery time.

Abstract #36277 Figure 1 MOAA/S Scoring system for patient anxiety levels

Abstract #36277 Figure 2 Pt with VR on awaiting Axillary block

CASE SERIES OF PATIENT SATISFACTION LEVELS WITH LOCO-REGIONAL ANAESTHESIA & IMMERVE VIRTUAL REALITY (VR) SEDATION

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Application for ESRA Abstract Prizes: I don’t wish to apply for the ESRA Prizes

Background and Aims Immersive Virtual Reality (VR) simulator used in anaesthesia for relaxing images, videos and sounds, to engage the patient from the distraction of surgery. 3-D environment puts patient in hypnotic state and reduces Phobias and stress levels. Virtual reality distraction decreases routine intravenous sedation and procedure-related pain during preoperative blocks (1). VR for Peripheral Regional Anaesthesia (VR-PERLA Study), demonstrated benefit in improved patient satisfaction levels. Aim - 1. Primary outcomes are to study patient self reported satisfaction levels with and without VR. 2. Secondary outcomes were patient anxiety levels monitored with or without VR and reduced sedation requirements.

Methods 1. 15 Patients for elective orthopaedic surgery were consented for VR under Loco-regional anaesthesia (Adductor canal, axillary, interscalene blocks). VR initiated on arrival to Anaesthesia room. Comparison were made with 15 similar patients undergoing similar procedures without VR. 2. Self-reporting patient’s satisfaction on five-point Likert scale (1 = very dissatisfied, 2 = dissatisfied, 3 = neutral, 4 = satisfied, and 5 = very satisfied).

1. Modified Observer’s Assessment of Alertness and Sedation (MOAA/S) scale 6-point scale.

Results 2. MOAA/S scales were 5 in all patients having VR, with appropriate response to verbal stimuli. 3. Likert scale - all VR patients were satisfied.

Table 3. Modified Observer’s Assessment of Alertness/Sedation Scale (MOAA/S)

<table>
<thead>
<tr>
<th>Score</th>
<th>Responsiveness</th>
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<tbody>
<tr>
<td>6</td>
<td>Agitated</td>
</tr>
<tr>
<td>5</td>
<td>Responds readily to name spoken in normal tone (alert)</td>
</tr>
<tr>
<td>4</td>
<td>Lethargic response to name spoken in normal tone</td>
</tr>
<tr>
<td>3</td>
<td>Responds only after name is called loudly and/or repeatedly</td>
</tr>
<tr>
<td>2</td>
<td>Responds only after mild prodding or shaking</td>
</tr>
<tr>
<td>1</td>
<td>Does not respond to mild prodding or shaking</td>
</tr>
<tr>
<td>0</td>
<td>Does not respond to deep stimulus</td>
</tr>
</tbody>
</table>

Conclusions 1. Both Primary and secondary outcomes met through VR use. 2. Onset of peripheral nerve block, administration of systemic analgesics, Pre-op anxiety & analgesic history pre-op were significant determinant factors for patients’ level of satisfaction. 3. VR reduces anxiety & sedation requirements levels in Loco-Regional anaesthesia and improves satisfaction with more Haemodynamic stability.

Attachment Likert Questionnaire used.pdf

visit, no need of rescue analgesics registered, and the patient was discharged home on postoperative day 2.

Conclusions Rett syndrome is a rare genetic disorder and therefore recommendations regarding anesthetic management are scarce and there are no reports of regional anesthesia. Anesthetic considerations should include: possibility of a difficult airway; risk of prolonged QT interval and T wave changes; increased sensitivity to sedative drugs; and anatomical malposition of vessels. In this case report we show that regional anesthesia can be an effective and safe approach in patients with Rett syndrome.