USING EXTENDED RELEASE BUPRENORPHINE INJECTION TO DISCONTINUE SUBLINGUAL BUPRENORPHINE: A CASE SERIES

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BACKGROUND

• Sublingual Buprenorphine (SL-BUP)
  • Highly effective opioid use disorder (OUD) treatment
  • Increasingly used in chronic pain treatment
• While guidelines recommend long-term OUD treatment, some may desire discontinuation of buprenorphine

BACKGROUND

• Tapering off SL-BUP is challenging due to protracted, intolerable withdrawal symptoms related to
  • Duration of SL-BUP exposure
  • Prolonged half-life (~35-hour)
  • High potency
    • Lowest SL-BUP dose 2mg (80 MME) occupies 48% opioid receptors

• In 2017, FDA approved extended-release buprenorphine (XR-BUP) for treatment of OUD

• XR-BUP is long acting injectable buprenorphine
  • half-life 46-60 days (vs SL-BUP ~35 hours)
  • administered monthly into abdominal subcutaneous tissue

METHODS

• Reviewed three successful cases using a single XR-BUP 100mg injection to taper stable patients maintained on SL-BUP off buprenorphine
<table>
<thead>
<tr>
<th>AGE</th>
<th>GENDER</th>
<th>SUBSTANCE RELATED DIAGNOSES</th>
<th>OPIOID USE PRIOR TO SL-BUP</th>
<th>MAX SL-BUP DOSE, TOTAL TIME ON SL-BUP</th>
<th>SL-BUP TAPER ATTEMPTS</th>
<th>SL-BUP DOSE AT TIME OF XR-BUP</th>
<th>PATIENT-REPORTED EXPERIENCE WITH SINGLE XR-BUP DOSE</th>
<th>MONTHLY FOLLOW-UP</th>
</tr>
</thead>
<tbody>
<tr>
<td>51yo</td>
<td>Male</td>
<td>Moderate opioid use disorder, Alcohol use disorder in sustained remission</td>
<td>Smoking heroin 1 year</td>
<td>8mg qday, 6 years</td>
<td>Several times over 5 years, decreased to 2mg, tried taper using buprenorphine patch and tramadol</td>
<td>4mg</td>
<td>“Slight, not intolerable, malaise”, irritableness in 4\textsuperscript{th}-6\textsuperscript{th} week “akin to not having coffee”, pre-injection constipation resolved over 2-3 months</td>
<td>Opioid cessation since Feb. 2019</td>
</tr>
<tr>
<td>35yo</td>
<td>Female</td>
<td>Physiologic opioid dependence; Alcohol use disorder in sustained remission</td>
<td>Prescription oxycodone 25-30mg daily for migraine headaches during pregnancy.</td>
<td>6mg qday, 14 months</td>
<td>Decreased to 2mg for 10 months,</td>
<td>2mg</td>
<td>“I experienced absolutely zero withdrawal symptoms once the long acting buprenorphine was in place, the only downside was a small amount of pain at injection”</td>
<td>Opioid cessation since Feb. 2019</td>
</tr>
<tr>
<td>46yo</td>
<td>Female</td>
<td>Physiologic opioid dependence</td>
<td>Prescription opioids for acute post-operative pain up to 954 MME</td>
<td>20mg qday, 13 months</td>
<td>Decreased to 6mg for 9 months</td>
<td>6mg</td>
<td>“Once I had the shot I had no withdrawal symptoms even after the first month”</td>
<td>Since Aug. 2019, three episodes of acute pain req 1-4 week opioid Rx</td>
</tr>
</tbody>
</table>
DISCUSSION

• Off label use for XR-BUP because
  • Did not follow recommended induction regimen for XR-BUP of two 300mg injections monthly followed by 100mg injection monthly
  • Two of these patients on buprenorphine for physical dependence to prescribed opioids and did not meet OUD criteria
• Unique subset of stable patients with long-term outpatient follow-up appropriate to discontinue buprenorphine
• Approach may not be appropriate for all patients maintained on SL-BUP
IMPLICATIONS

• These cases support a novel off-label use of XR-BUP to mitigate intolerable opioid withdrawal symptoms among stable patients who desire to discontinue SL-BUP

• Further research needed to determine which patients may be most successful with XR-BUP used for SL-BUP discontinuation with a focus on
  • Indication for buprenorphine initiation (e.g. chronic pain and/or OUD)
  • Severity of OUD
  • Psychosocial stability
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