Author's response to reviews

Title: Parenteral lidocaine for treatment of intractable renal colic: Case series

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Author's response to reviews: see over
Dear reviewers,

Thank you for your thoughtful review of our manuscript. We take your concerns seriously and have addressed them to the best our abilities. We asked from one of our english literature academic staff to edit the manuscript. We address your comments point by point in Green and Red fonts as follow:

Q₁: Introduction, last paragraph: "..wheras graphies with..": what does this mean?
For further studies, Kidney ureter bladder ( KUB ) graphy was requested immediately for the patient who was resistant to lidocaine. However, for other patients who had responded to lidocaine, graphies ( KUB ) with previous preparation were requested and the obtained results are presented in Table 2.

Q₂: Since your manuscript is a Case Series, please could you modify this section. The case presentation should contain a description of the patient’s relevant demographic information (without adding any details that could lead to the identification of the patient); any relevant medical history of the patient; the patient’s symptoms and signs; any tests that were carried out and a description of any treatment or intervention. This section may be broken into subsections with appropriate subheadings. If it is a case series, then details must be included for all patients.

Clinical cases

Case 1

Case one was a thirty-one-year old Iranian female who had been referred to the emergency department due to refractory renal colic (resistant to morphine and NSAIDS). The patient had a history of renal colic and in spite of receiving morphine and NSAIDS previously, she had mentioned no regression in pain degree (VAS=10/10). In clinical examination, tenderness in left CVA radiating to genitalia associated with dysuria, frequency and nausea was observed. Abundant RBC was detected in urine analysis and moderate hydronephrosis of left kidney was reported in ultrasonography. After obtaining written consent, Lidocaine 1.5 mg/kg (IV) was administered. Ten, twenty, and thirty minutes after treatment VAS of the patient decreased to 3/10, 0/10 and 0/10, respectively. After Lidocaine administration, the patient experienced a transient dizziness lasting for less than a minute. The patient was followed up in the hospital until she was discharged. The follow up was carried out by telephone for more 24 hours after discharge. No colic pain was experienced by the patient in the follow up period. In a planned KUB graphy which was requested the day after discharge from emergency ward, a radiopaque stone was observed.

Case 2

Case two was a thirty-two-year-old Iranian male who had been referred to the emergency department due to refractory renal colic (resistant to morphine and NSAIDS). Despite the fact
that he had previously received morphine and NSAIDS, he had mentioned no regression in pain degree (VAS=9/10). In clinical examination, tenderness in right CVA radiating to genitalia associated with dysuria, hematuria, nausea and vomiting was observed. Abundant RBC was seen in urine analysis and moderate hydronephrosis of right kidney was reported in ultrasonography. After obtaining written consent, Lidocaine 1.5 mg/kg (IV) was administered. Ten, Twenty, and Thirty minutes after treatment VAS of the patient decreased to 2/10, 0/10 and 0/10, respectively. Transient dizziness and slurring of speech lasting for less than a minute were the problems the patient experienced after Lidocaine administration. He was followed up in the hospital until he was discharged. The follow up procedure was continued by telephone for more 24 hours after discharge. The patient didn’t report any colic pain in the follow up period. In a planned KUB graphy which was requested the day after discharge from emergency ward, a radiopaque stone was observed.

Case 3

Case tree was a thirty-eight-year-old Iranian male who had been referred to the emergency department suffering refractory renal colic (resistant to morphine and NSAIDS). The patient had a history of renal colic and in spite of receiving morphine and NSAIDS previously, he had mentioned no regression in pain degree (VAS=10/10). In clinical examination, tenderness in left CVA radiating to genitalia associated with dysuria, frequency and nausea was observed. Abundant RBC was observed in urine analysis and mild hydronephrosis of left kidney was reported in ultrasonography. With the patient’s written consent, Lidocaine 1.5 mg/kg (IV) was administered. Ten, Twenty, and thirty minutes after treatment VAS of the patient decreased to 0/10, 0/10 and 0/10, respectively. After Lidocaine administration, he experienced no adverse events. The patient was followed up in the hospital until he was discharged. This was extended until the day after discharge and was carried out by telephone. In the follow up period, no colic pain was experienced by the patient. In a planned KUB graphy which was requested the day after discharge from emergency ward, a radiopaque stone was observed.

Case 4

Case four was a twenty-eight-year old Iranian female who had been referred to the emergency department due to refractory renal colic (resistant to morphine and NSAIDS). In spite of receiving morphine and NSAIDS previously, she had mentioned no regression in pain degree (VAS=9/10). In clinical examination, tenderness in right CVA radiating to genitalia associated with dysuria, frequency and nausea was observed. Abundant RBC was seen in urine analysis and mild hydronephrosis of right kidney was reported in ultrasonography. The patient’s written
Case 5

Our Case five was a forty-two-year old Iranian male who had been referred to the emergency department due to refractory renal colic (resistant to morphine and NSAIDS). Although the patient had previously received morphine and NSAIDS, he had mentioned no regression in pain degree (VAS=9/10). In clinical examination, tenderness in left CVA radiating to genitalia associated with dysuria, frequency, nausea and vomiting was observed. Abundant RBC was seen in urine analysis and moderate hydronephrosis of left kidney was reported in ultrasonography. Once the patient’s written consent was obtained, Lidocaine 1.5 mg/kg (IV) was administered. Ten, twenty, and thirty minutes after treatment VAS of the patient decreased to 3/10, 2/10 and 0/10, respectively. After Lidocaine administration the patient didn’t experience any adverse events. The patient was followed up in the hospital until he was discharged. This was continued by telephone for 24 hours after discharge. No colic pain was experienced by the patient in the follow up period. In a planned KUB graphy which was requested the day after discharge from emergency ward, a radiopaque stone was observed.

Case 6

Case six was a thirty-five-year old Iranian male who had been referred to the emergency department due to refractory renal colic (resistant to morphine and NSAIDS). In spite of receiving morphine and NSAIDS previously, he had mentioned no regression in pain degree (VAS=7/10). Clinical examination, revealed tenderness in left CVA radiating to genitalia associated with dysuria, frequency, nausea and vomiting. Abundant RBC was detected in urine analysis and moderate hydronephrosis of left kidney was reported in ultrasonography. After obtaining written consent, Lidocaine 1.5 mg/kg (IV) was administered. Ten, twenty, and thirty minutes after treatment VAS of the patient decreased to 0/10, 0/10 and 0/10, respectively. After Lidocaine administration the patient experienced no adverse event. The patient was followed up in the hospital until he was discharged. This was carried out by telephone for more 24 hours after discharge.
discharge. No colic pain was reported by the patient in the follow up period. In a planned KUB graphy which was requested the day after discharge from emergency ward, a radiopaque stone was observed.

**Case 7**
Case seven was a thirty-six-year old Iranian male who had been referred to the emergency department suffering refractory renal colic (resistant to morphine and NSAIDS). He had received morphine and NSAIDS previously; but, he had mentioned no regression in pain degree (VAS=9/10). In clinical examination, tenderness in right CVA radiating to genitalia associated with hematuria, dysuria and frequency was observed. Abundant RBC was seen in urine analysis and moderate hydronephrosis of right kidney was reported in ultrasonography. After obtaining written consent, Lidocaine 1.5 mg/kg (IV) was administered. Ten, twenty, and thirty minutes after treatment VAS of the patient decreased to 6/10, 8/10 and 8/10, respectively. After Lidocaine administration the patient didn’t experience any adverse events. Because of inconsistent response to lidocaine, this patient needed an additional anodyne treatment. KUB was requested immediately for this patient for further studies, and a number of radiopaque stones were observed.

**Case 8**
Case eight was a thirty-five-year old Iranian male who had been referred to the emergency department due to refractory renal colic (resistant to morphine and NSAIDS). The patient had a history of renal colic and in spite of receiving morphine and NSAIDS previously, he had mentioned no regression in pain degree (VAS=8/10). Clinical examinations revealed tenderness in right CVA radiating to genitalia associated with dysuria, frequncy, nausea and vomiting. Abundant RBC was seen in urine analysis and moderate hydronephrosis of right kidney was reported in ultrasonography. Once his written consent was obtained, Lidocaine 1.5 mg/kg (IV) was administered. Ten, twenty, and thirty minutes after treatment VAS of the patient decreased to 0/10, 0/10 and 0/10, respectively. After Lidocaine administration, the patient experienced a transient slurring of speech lasting for less than a minute. The patient was followed up in the hospital until he was discharged. This was carried out for more 24 hours by telephone while he was resting at home after discharge. This patient experienced renal colic and rated his pain as 3/10. The pain was relieved by NSAIDS. In a planned KUB graphy which was requested the day after discharge from emergency ward, a radiolucent stone was observed.
### Table 2- Individual patient characteristics

<table>
<thead>
<tr>
<th>Case</th>
<th>Age</th>
<th>Gender</th>
<th>Kind of Stone</th>
<th>Stone side</th>
<th>Stone Condition</th>
<th>Hydronephrosis</th>
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<tr>
<td>1</td>
<td>31</td>
<td>F</td>
<td>Radiopaque</td>
<td>Left</td>
<td>RS</td>
<td>Moderate</td>
</tr>
<tr>
<td>2</td>
<td>32</td>
<td>M</td>
<td>Radiopaque</td>
<td>Right</td>
<td>FS</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>38</td>
<td>M</td>
<td>Radiopaque</td>
<td>Left</td>
<td>RS</td>
<td>Mild</td>
</tr>
<tr>
<td>4</td>
<td>28</td>
<td>F</td>
<td>Radiolucent</td>
<td>Right</td>
<td>FS</td>
<td>Mild</td>
</tr>
<tr>
<td>5</td>
<td>42</td>
<td>M</td>
<td>Radiopaque</td>
<td>Left</td>
<td>FS</td>
<td>Moderate</td>
</tr>
<tr>
<td>6</td>
<td>35</td>
<td>M</td>
<td>Radiopaque</td>
<td>Left</td>
<td>FS</td>
<td>Moderate</td>
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<tr>
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<td>Right</td>
<td>FS</td>
<td>Moderate</td>
</tr>
<tr>
<td>8</td>
<td>35</td>
<td>M</td>
<td>Radiolucent</td>
<td>Right</td>
<td>RS</td>
<td>Mild</td>
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</tbody>
</table>

Looking to hear from you

Best regards

Authors