Patient Perceptions of Iliac Crest Bone Grafting in Minimally Invasive Transforaminal Lumbar Interbody Fusion

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Disclosures

Brittany E. Haws, Benjamin Khechen, Dil Patel, Mundeep S. Bawa, Harmeet S. Bawa, Kaitlyn L. Cardinal, Jordan A. Guntin, Andrew Block—Nothing to disclose

Kern Singh, MD

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Introduction

• Iliac crest bone grafting (ICBG) is an effective option for promoting arthrodesis in minimally invasive transforaminal lumbar interbody fusion (MIS TLIF)

• ICBG harvest has been associated with postoperative pain at the donor site

• The true incidence of donor site pain has been debated in the literature
Purpose

• To determine patient’s perception of ICBG harvesting and the development of donor site pain following MIS TLIF.
Methodology

- Primary, single-level MIS TLIF with ICBG
  - Performed using a percutaneous technique with a tubular retractor
- Patients with at least three months of postoperative follow up
  - Average follow up = 9 months (3-18)
Methodology

- Eligible patients were surveyed
  - What was the side of ICBG harvest?
  - How confident are you in this answer?
  - Do you have pain at the harvest site?

- Responses compared to:
  - Patient demographics
  - Procedural characteristics
  - True side of ICBG harvest
Most patients had surgery at L4L5 (52.4%) followed by L5S1 (42.9%)

97.6% of patients had left-sided ICBG harvest
Results

- Half of all patients reported occasional (31.7%) or consistent (18.3%) pain at their ICBG harvest site.

- Exact half of the patients correctly identified the side of their ICBG harvest (50.0%)

- 47.6% of patients reported that they were not confident or had guessed in identifying the side of their ICBG harvest.

<table>
<thead>
<tr>
<th>Table 2. Questionnaire Responses</th>
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<tbody>
<tr>
<td>N=82</td>
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<tr>
<td><strong>Which side do you think was harvested?</strong></td>
</tr>
<tr>
<td>Left</td>
</tr>
<tr>
<td>Right</td>
</tr>
<tr>
<td><strong>How confident are you in your answer?</strong></td>
</tr>
<tr>
<td>Not Confident/Guessed</td>
</tr>
<tr>
<td>Somewhat Confident</td>
</tr>
<tr>
<td>Very Confident</td>
</tr>
<tr>
<td><strong>Do you experience pain at your ICBG harvest site?</strong></td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Occasionally</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td><strong>ICBG harvest site pain (Mean ± SD)</strong></td>
</tr>
<tr>
<td><strong>Correctly identified side of ICBG harvest</strong></td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

SD = Standard deviation; ICBG = Iliac crest bone graft
Patients in pain were less likely to correctly identify side of ICBG harvest and were overall more confident in their answers.
Results

A total of 23 patients (28%) correctly identified the ICBG Harvest site, with 69.6% of these patients being very confident in their answers.
Discussion

- Majority of patients reporting donor site pain unable to correctly identify side of ICBG harvest
  - May be attributing other sources of pain to ICBG harvest

- 50% of patients guessed on ICBG harvest side identification
  - Likely not as significant a pain source as reported in literature

- True donor site pain present in at most 14.6% of patients
Limitations

• Only patients with 3 months of follow up were included
  • Some may have experienced donor site pain that later resolved

• Patients reporting donor site pain were not further evaluated to confirm etiology of pain

• Patients’ reasoning for their perceived site of harvest was not assessed
Conclusions

• Half of patients undergoing MIS TLIF with ICBG are able to correctly identify harvest site.

• Majority of patients reporting pain incorrectly identified the side of harvest:
  • Likely attributing other sources of pain to the ICBG harvest site.

• The rate of true donor site pain greater than three months after ICBG harvest for MIS TLIF is 14.6%:
  • Suggests rates of donor site pain may be over-reported in the current literature.

• The potential for donor site pain should not preclude lumbar fusion patients from receiving ICBG.
THANK YOU!

Contact us about questions and membership opportunities

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