Pain after forefoot surgery comparing day-surgery and conventional hospitalization: a continuous prospective study of 317 patients

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DISCLOSURE

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- J-L. BESSE, MD, PhD - consultant contract with Biotech-Wright
- P. CHAUDIER, MD - no potential conflicts with this presentation
- M. BOURDIN, PhD - no potential conflicts with this presentation
- M-H. FESSY, MD, PhD, Pr. - no potential conflicts with this presentation

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Day-surgery practice in Europe in 2009 [1]
CONTEXT

- Specific challenges for the management of pain in day-surgery
- Few recommendations as to which procedures are appropriate for management in this setting
- Few studies comparing day-surgery with conventional in-patient surgery
- Aim: to compare the level of post-operative pain following forefoot surgery performed as a day-surgery case vs in-patient
MATERIAL & METHODS

• Prospective study; single surgeon
• All patients who underwent forefoot surgery
• Day-case surgery for all those eligible using the French Society of Anesthesia guidelines
• 4 categories from minor to complex
• Local and regional anesthesia primarily
• Same oral analgesic protocol regardless of the type of admission
• Primary end point: level of pain during the first 3 post-operative days
## MATERIAL & METHODS

<table>
<thead>
<tr>
<th>Category</th>
<th>Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category 1</strong></td>
<td><strong>Minor procedures</strong></td>
</tr>
<tr>
<td></td>
<td>- Correction of claw toe</td>
</tr>
<tr>
<td></td>
<td>- Excision of Morton’s neuroma</td>
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<td></td>
<td>- Removal of metalwork</td>
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<td><strong>Category 2</strong></td>
<td><strong>Light procedures</strong></td>
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<tr>
<td></td>
<td>- Scarf osteotomy</td>
</tr>
<tr>
<td></td>
<td>- 1st metatarsophalangeal joint arthrodesis</td>
</tr>
<tr>
<td><strong>Category 3</strong></td>
<td><strong>Category 2 procedures + Weil’s osteotomy of one or two lesser metatarsals</strong></td>
</tr>
<tr>
<td><strong>Category 4</strong></td>
<td><strong>Major procedures</strong></td>
</tr>
<tr>
<td></td>
<td>- Category 2 procedures + Weil’s osteotomy of more than two lesser metatarsals +/- claw toe correction</td>
</tr>
<tr>
<td></td>
<td>- Category 2 procedures + resection arthroplasties of lesser metatarsals +/- claw toe correction</td>
</tr>
</tbody>
</table>
RESULTS

- 317 patients, 40% day-surgery
- In-patients were older and had a higher ASA score
- No difference in terms of major comorbidities
- 70% of hallux valgus; 9% for revision surgery
- No difference on the level of pain regarding the type of anesthesia and the time to the recovery of sensation
- No re-admission for pain
RESULTS

Distribution of maximal daily pain on numerical scale on the first 3 post-operative days
Distribution of maximal daily pain on Numerical Scale (NS max) according to the category of procedure.
RESULTS

Proportion of patients judging their pain ≥ 8/10

- **Day-surgery**
- **Hospitalization**

<table>
<thead>
<tr>
<th>Day</th>
<th>Hospitalization</th>
</tr>
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<tbody>
<tr>
<td>J0</td>
<td>10%</td>
</tr>
<tr>
<td>J1</td>
<td>9%</td>
</tr>
<tr>
<td>J2</td>
<td>2%</td>
</tr>
<tr>
<td>J3</td>
<td>1%</td>
</tr>
</tbody>
</table>

Note: The bars represent the percentage of patients in each category for each day.
DISCUSSION

No difference on the level of pain after forefoot surgery as day-surgery or as in-patient

Forefoot surgery can be painful (10% patients judging their pain extreme)

Forefoot day-surgery is as safe as conventional admission

Day-surgery is cost-effective \(^2, 3\)
REFERENCES


• [5] P Chaudier, M Bourdin, J Gauthier, MH Fessy, JL Besse. Similar levels of pain are reported in forefoot surgery after management as a day-case and admission for 48 hours: a continuous prospective study of 317 patients. *Bone Joint J* 2015;97B:1645–50.