Prevention of Infection in Pin Sites

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Prevention of Infection in Pin Sites
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PATIENT CARE ISSUE
External fixation: skeletal apparatuses that attach to wire or pins that penetrate the bone. Used for complex fractures and limb deformity. Allow stability and early mobilization/weight-bearing.

11-100% of patients with external fixation develop some form of infection

Inclusion Criteria: articles relevant to pin site care and prevention of infection in external fixators.

Exclusion Criteria: acceptance of articles only published within the last five years (2007-2012)

Databases: MEDLINE, Cochrane, CINAHL, PubMed

Total sources: 10 credible

METHODS

Total sources: 10 credible

Databases: MEDLINE, Cochrane, CINAHL, PubMed

Key Words: "orthopedic fixation device," "external fixation device," "pin site care," "prevention," "treatment," "infection"

Exclusion criteria: acceptance of articles only published within the last five years (2007-2012)

Inclusion Criteria: articles relevant to pin site care and prevention of infection in external fixators, international sources accepted

RESULTS

A total of 15 articles were gathered. Only 9 were referenced within the paper. The consensus among the sources is that six categories need to be addressed when discussing pin site care. These include frequency of cleanings, types of cleansing, solutions, bathing/showering, types of dressing, compression and management of crusts.

<table>
<thead>
<tr>
<th>Author, Date</th>
<th>Types of Articles</th>
<th>Level of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amanti et al, 2012</td>
<td>RCT</td>
<td>Level 2</td>
</tr>
<tr>
<td>Bell et al, 2008</td>
<td>Clinical Guidance Article</td>
<td>Level 2</td>
</tr>
<tr>
<td>Camathias et al, 2012</td>
<td>RCT</td>
<td>Level 2</td>
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<tr>
<td>Lagerquist et al, 2012</td>
<td>Descriptive</td>
<td>Level 6</td>
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<tr>
<td>Lee et al, 2011</td>
<td>RCT</td>
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<tr>
<td>Lethaby et al, 2011</td>
<td>Systematic Review</td>
<td>Level 1</td>
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<tr>
<td>Timms et al, 2011</td>
<td>Descriptive</td>
<td>Level 7</td>
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<td>Timms et al, 2012</td>
<td>Clinical Guidance Article</td>
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<tr>
<td>Walker et al, 2011</td>
<td>Clinical Guidance Article</td>
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LIMITATIONS

- Limited number of randomized control trials done on the subject
- Many factors to be considered including age, gender, location of pins, number of pins, length of time pins are in place, and the method by which the pins were inserted
- Many studies are flawed and lack validity due to inability to control all of these variables
- Wound site is precarious, as it is percutaneous and open to the outside world

REFERENCES


