Austin Moore
Hemiarthroplasty:
A retrospective analysis of Outcome
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Hip Fractures: Facts

✓ A common, serious and costly injury of older people.

✓ Multidisciplinary approach is required.
Hip Fractures: Facts

- 2.8 fractures per 1000 persons years
- Cost of a hip fracture is estimated to be £ 12000
- Annual cost in the UK was £ 942 million
Hip Fractures: Facts

- 1-year mortality is 8-33%
- Influenced by age, sex, nursing home residence, postoperative mobility
- Postoperative delirium in 35-65%
- DVT in 42%
- Skilled nursing care or inpatient rehabilitation is needed by 61% of patients.
- Rehospitalization rates are 16%-27% at 1 year
Treatment of Displaced Subcapital Hip Fractures IS STILL CONTROVERSIAL
Austin-Moore Hemiarthroplasty

**PROBLEMS**

- Acetabular erosion (groin pain)
- Painful aseptic loosening of the stem
- Dislocation (main cause of revision in the first 2 yrs)
Patients

All patients who underwent hemiarthroplasty between July 1999 and January 2002 were included in this study.

<table>
<thead>
<tr>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>178</td>
<td>45</td>
<td>223</td>
</tr>
</tbody>
</table>

Age

Mean Follow up was 515 days
Methods

- Outcome (Death, survival, lost to follow up, infection)
- Surgeon’s experience (consultant, registrar, sho)
- Pain currently
- Mobility currently
- Ambulation, feeding, bathing, dressing, toilet
- Food shopping, banking, laundry, housework, transportation

preoperatively & postoperatively
## Results

<table>
<thead>
<tr>
<th>Outcome</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death</td>
<td>105</td>
<td>47,1</td>
</tr>
<tr>
<td>Survival</td>
<td>92</td>
<td>41,3</td>
</tr>
<tr>
<td>Infection</td>
<td>1</td>
<td>0,4</td>
</tr>
<tr>
<td>Moved</td>
<td>25</td>
<td>11,2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>223</td>
<td>100,0</td>
</tr>
</tbody>
</table>
Kaplan-Meier Survival Analysis

Survival Function

Follow up (Months)

Cumulative Survival

- Censored

- Survival Function
Kaplan-Meier: Men vs Women

Survival Functions

follow up Months

Cum Survival

sex
- male
- male-censored
- female
- female-censored
Kaplan-Meier: Surgeon’s Experience

Survival Functions

Follow up Months

Cum Survival

surgeon's experience
- consultant
- consultant-censored
- sho
- sho-censored
- registrar
- registrar-censored
mobility

Preop:
- Nonambulatory: 5%
- Community: 26%
- Household: 70%

Postop:
- Nonambulatory: 12%
- Community: 36%
- Household: 52%
<table>
<thead>
<tr>
<th>Pain Level</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>no pain</td>
<td>40</td>
<td>43.5</td>
</tr>
<tr>
<td>no nsaids</td>
<td>12</td>
<td>13.0</td>
</tr>
<tr>
<td>occasional nsaids</td>
<td>13</td>
<td>14.1</td>
</tr>
<tr>
<td>regular nsaids</td>
<td>20</td>
<td>21.7</td>
</tr>
<tr>
<td>uncontrolled pain</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>92</td>
<td>100.0</td>
</tr>
<tr>
<td>Mobility Level</td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>Bedridden</td>
<td>3</td>
<td>3.2</td>
</tr>
<tr>
<td>wheelchair bound</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Frame</td>
<td>35</td>
<td>37.6</td>
</tr>
<tr>
<td>two sticks</td>
<td>8</td>
<td>8.6</td>
</tr>
<tr>
<td>one stick</td>
<td>20</td>
<td>21.5</td>
</tr>
<tr>
<td>unaided walking</td>
<td>14</td>
<td>15.1</td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>100</td>
</tr>
</tbody>
</table>
NEGATIVE CORRELATION

- Age group vs Outcome (p=0.025)
- Outcome vs Surgeon (p=0.023)

[Consultants had more deaths]
POSITIVE CORRELATION

- Mobility level currently vs mobility preoperatively (p=0.0001)
- Mobility postoperatively vs mobility preoperatively and mobility currently (p=0.0001)
- Pain level currently vs Age groups (p=0.034) (Age groups 70-80, 80-85, 85-90, 90-100)
- Mobility preoperatively vs pain level currently (p=0.05)
ambulation, feeding, bathing, dressing, toilet, food shopping, banking, laundry, housework and transportation deteriorated postoperatively

\( p<0.05 \)
Hip fractures represent a serious health problem.

Austin-Moore hemiarthroplasty is followed by significant pain and loss of function.

It should not be used in patients with high preoperative mobility, irrespective of their age.
Thank You