Background

• Historically, implant-based IR has far exceeded autologous reconstruction (AR)
• AR is associated with improved long-term patient satisfaction
• Lack of population-based studies examining contemporary patterns in IR
• Our objective was to assess recent trends, outcomes, and predictors of IR techniques using a nationally representative cohort

Methods

• 2009-2014 National Inpatient Sample
• Women undergoing inpatient mastectomy + IR
• Type of reconstruction: implant-based vs autologous (AR)
• AR was classified as microsurgical or pedicled flaps
• Primary outcomes: Inpatient complications, resource utilization, and length of stay (LOS)
• Multivariable logistic regressions were used to identify predictors of AR and microsurgical flap procedures

Results

• Of 194,073 women who underwent IR, 70.4% received implants
• Among AR: 54.6% received microsurgical flaps
• Utilization of deep inferior epigastric perforator flaps increased significantly (28.6 to 42.5% of AR, P<0.001)

Results Cont’d

• Implant-based IR remains the most common reconstructive technique in the US
• Microsurgical AR has increased significantly.
• Several sociodemographic and hospital factors were associated with the use of AR and microsurgical flaps
• Despite more inpatient complications and increased costs associated with AR, the growing use of microsurgical flaps may reflect a shift driven by long-term patient outcomes

Table 1. Hospitalization Costs, LOS, and Inpatient Complication Rates

<table>
<thead>
<tr>
<th></th>
<th>Implant</th>
<th>AR</th>
<th>Microsurgical</th>
<th>Pedicled</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs ($1000)</td>
<td>17.6</td>
<td>21.5</td>
<td>25.7</td>
<td>18</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LOS (days)</td>
<td>1.9</td>
<td>3.7</td>
<td>4.3</td>
<td>3.3</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Complications (%)</td>
<td>7.1</td>
<td>12.6</td>
<td>14.5</td>
<td>11.9</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Figure 1. Temporal Trends in Implant-based, Microsurgical, and Pedicled AR over time

Figure 2. Multivariable Analysis of Independent Predictors of AR and Microsurgical AR

Conclusions

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