Comparison of Human ADM to Porcine ADM in Immediate Breast Reconstruction

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Purpose

• Compare porcine ADM to human ADM, made by the same company

• Used for immediate breast reconstruction with tissue expanders and breast implants
ADM Grafts

Human

Porcine
Immediate Breast Reconstruction with Tissue Expander Implant

Total Muscle Coverage       ADM Sling
Method

• Retrospective, consecutive, case review
• All cases of immediate reconstruction using ADM
• Human ADM 2010 and 2011
• Porcine ADM in 2012 and 2013
Method

• One hospital
• ACS approved Breast Cancer Center
• 4 general surgeons
• 2 plastic surgeons
Results

• 153 patients, 234 reconstructed breasts

• Human ADM: 98 breasts, skin sparing
  0 breasts, nipple sparing

• Porcine ADM: 115 breasts, skin sparing
  21 breasts, nipple sparing
Results

Human vs Porcine

BMI, age, ADM size similar in both groups
## Summary of Results

<table>
<thead>
<tr>
<th></th>
<th>Mastectomy Weight</th>
<th>Initial Fill Volume</th>
<th>Implant Loss</th>
<th>Infection</th>
<th>Skin Loss</th>
<th>Seroma</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human ADM:</strong></td>
<td>793 grams</td>
<td>279 ml</td>
<td>7 (7%)</td>
<td>6 (6%)</td>
<td>4 (4%)</td>
<td>5 (5%)</td>
</tr>
<tr>
<td><strong>Porcine ADM</strong></td>
<td>622 grams</td>
<td>343 ml</td>
<td>5 (4%)</td>
<td>7 (5%)</td>
<td>13 (10%)</td>
<td>24 (18%)</td>
</tr>
</tbody>
</table>
Results

All Porcine ADM cases:
Skin loss 10%, Seroma 18%

Nipple sparing mastectomy:
Skin loss 6/21 breasts, 29%

If nipple sparing mastectomy excluded from Porcine ADM group:

Skin loss for Porcine ADM is 5%
But seroma rate still high at 18%
Results

• Higher seroma rate for Porcine ADM
• Treated with aspiration or open drainage
• Successful reconstruction achieved
• Implant loss rates and infection rates similar to human ADM
Incorporation of ADM
Seen at Second Stage Procedure
Conclusion

• Human ADM and Porcine ADM in immediate breast reconstruction are comparable and effective
• Higher seroma rates were found with Porcine ADM use
• Outcomes similar to other reported series
References


