Clinical and Economic Impact of Adhesiolysis During Repeat Cesarean Delivery

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Abstract

To estimate adhesiolysis rates at cesarean delivery (CD) and to estimate costs and clinical implications of performing adhesiolysis at repeat CD.

Methods

Propensity score matched analysis comparing costs and complications between repeat CD patients with and without adhesiolysis.

Results

- 166,980 repeat cesarean patients identified; 10,261 (6%) with adhesiolysis.
- In 223,129 primary cesareans, 1,056 (0.5%) had adhesiolysis
- Adhesiolysis patients matched 1:1 with controls. Well matched on all characteristics.
- Both groups:
  - Mean age, 29.9 y
  - 39% black, 21% white, 14% Hispanic, 26% other
  - 40% Medicaid/charity, 60% commercial insurance

Indication for 20,522 Repeat Cesareans*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Adhesiolysis (N = 10,261)</th>
<th>Control (N = 10,261)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective repeat cesarean</td>
<td>1.1%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other</td>
<td>0.7%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Obstetric complication*</td>
<td>1.2%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Postpartum hemorrhage*</td>
<td>1.9%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Transfusion*</td>
<td>1.9%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Damage to pelvic organs/vessels*</td>
<td>1.0%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Hysterectomy*</td>
<td>1.4%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Wound complications*</td>
<td>1.4%</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

*after matching, therefore same proportions in 10,261 adhesiolysis and 10,261 control patients

Limitations

Data were collected for billing purposes, some clinical data were not available. Study of adhesiolysis, not adhesions. Data may not be representative of broader US population.

Conclusions

- Study groups were well matched on all relevant characteristics.
- Total cost was almost $300 higher, operating room time was 10 minutes longer, and LOS was extended by several hours in the adhesiolysis group.
- Cesarean hysterectomy occurred twice as often in women with adhesiolysis.
- Adhesiolysis patients were more likely to have other serious complications, including damage to pelvic organs or vessels, wound complications, infections, postpartum hemorrhage, and transfusions.
- Lysing adhesions increases the length and difficulty of surgery, and the resultant intraoperative and postoperative complications increase both LOS and cost.

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