To determine the safety of etonogestrel contraceptive implant use among reproductive-age women who are solid organ transplant recipients.

Etonogestrel contraceptive implant uptake and safety among solid organ transplant recipients

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Introduction

• Reproductive-age women who are solid organ transplant recipients face significant medical risks with unintended pregnancies.
• Recommendation to avoid pregnancy for the first 12-24 months after solid organ transplantation.
• Current literature has focused entirely on safety of intrauterine devices and combined hormonal contraceptives among solid organ transplant recipients.
• No published studies to date on the most efficacious contraceptive method, the etonogestrel contraceptive implant (Nexplanon®).
• Etonogestrel implant provides at least three years of highly effective contraception (>99%) with increasing uptake, especially among adolescent and young adult populations.
• Knowledge gap on the use and risks of the etonogestrel contraceptive implant among solid organ transplant recipients.

Methods

• Patients who sought care at tertiary medical center: Children’s Hospital Colorado (CHCO) or University of Colorado Hospital (UCH)
• January 2011 to January 2019
• Reproductive age women (14-45 years)
• Underwent solid organ transplantation

Cases

• Identified cases based on any use of the etonogestrel contraceptive implant

Controls

• Without hormonal contraceptive use for at least 3 years after transplantation
• Matched cases to controls (1:1) based on age and transplant organ type

Data Extraction

• Health data warehouse (Compass) pulled potential cases and controls
• Reviewed electronic health records for outcomes of interest (i.e. pregnancy, implant-related side effects, infections, adjustments in immunosuppressant therapy, graft complications)
• Occurred during contraceptive implant use (cases)
• Occurred within 3 years of transplantation (controls)

Results

Table 3: Transplant-related outcomes for cases and controls within 3-year time window

<table>
<thead>
<tr>
<th>Case/Control</th>
<th>Any pregnancies</th>
<th>Any infections</th>
<th>Any transplant-related complication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases (n=24)</td>
<td>1 (4.2%)</td>
<td>12 (50.0%)</td>
<td>1 (4.2%)</td>
</tr>
<tr>
<td>Controls (n=24)</td>
<td>1 (4.2%)</td>
<td>13 (54.2%)</td>
<td>1 (4.2%)</td>
</tr>
</tbody>
</table>

p-value: 1.0

Excluded Cases

• Did not receive etonogestrel implant (n=9)
• Did not receive a solid organ transplant (n=10)
• Used other forms of contraception (n=4)

Excluded Controls

• Not within reproductive age
• Use of contraception during 3-year post-transplantation window (n=20)
• Did not receive solid organ transplant (n=11)

Assessed for eligibility (n=506)

Not Selected for Evaluation (n=278)

Randomly Selected for Evaluation as Controls (n=15)

Implications

Improvement of patient counseling for solid organ transplant recipients considering use of the etonogestrel contraceptive implant as a safe and efficacious contraceptive option.