Building National Infrastructure for Postmarket Surveillance of Silicone Breast Implants

Nilsa Loyo-Berríos, PhD, MSc
Associate Director
Division of Epidemiology

Office of Surveillance and Biometrics
Center for Devices and Radiological Health
Overview of Presentation

• Breast Implant Procedure Trends
• Silicone Gel Breast Implants Regulatory History
• Post-Approval Studies (PAS) as Conditions of Approval
• Innovative Methodologies for PAS
• Development of Breast Implant Registries
• Next Steps and Final Remarks
Breast Implants Procedure Trends

- Breast augmentation continues to be the top cosmetic surgical procedure
- Breast Augmentation in...

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<tbody>
<tr>
<td>Breast Augmentation</td>
<td>286,274</td>
<td>307,180</td>
<td>212,500</td>
<td>35%</td>
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<tr>
<td>Breast Implants Removals (Augmentation)</td>
<td>21,609</td>
<td>22,271</td>
<td>40,787</td>
<td>-47%</td>
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<tr>
<td>Breast Reconstruction</td>
<td>91,655</td>
<td>96,277</td>
<td>78,832</td>
<td>16%</td>
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<tr>
<td>Breast Implants Removals (Reconstruction)</td>
<td>16,596</td>
<td>15,735</td>
<td>16,287</td>
<td>2%</td>
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Source: ASPS Plastic Surgery Statistics 2012 Report
Breast Implants Procedures by Age

*Total represents only 18 and 19 year olds.

Source: ASPS Plastic Surgery Statistics 2012 Report
Silicone Breast Implants Regulatory History

- Medical Device Amendment to FDA Act
  - Class II devices
  - 510K Review 5/1976

- Final Rule Call for PMAs 4/1991
  - FDA voluntary moratorium
    - Requested stop supply/implanting 1/1992
  - FDA concluded no sufficient data to support approval

- Access through Adjunct Study for reconstruction patients or for replacement of existing SGBI. Both as investigational devices. 4/1992

- Reclassified as Class III

- Continued to be reviewed through 510K until Final Rule Call for PMAs 7/1988

- FDA approved two PMAs 11/2006
  - FDA approved new SGBI 3/2012

- FDA Update on Anaplastic Large Cell Lymphoma (ALCL) 1/2011
  - Development of PROFILE Registry 2011
  - Postmarket Advisory Panel 8/2011

- FDA Update on Safety of SGBI 5/2011


Began work with stakeholders to develop National Registry 10/2012

FDA approved highly cohesive silicone gel BIs 2/ and 6/2013
Post-Approval Studies (PAS) for 2006 PMA Approvals

1. CORE Study- 10-years
2. Adjunct Study- 5-years
3. New Enrollment: LARGE Study, 10-years
4. Informed Decision Survey
5. Focus Group Study
6. Device Failure Studies

- Both PMAs have fulfilled conditions no. 1-2, 4-5
- LARGE studies ongoing
  - Completed enrollment of 40,000+ subjects
  - Difficulty with follow-up rate
Innovative Approaches for New Approvals

• Post-Approval Studies
  – Case-Control Studies for rare endpoints
  – Smaller cohort studies for less rare endpoints
    • Informed decision process and device failure analysis within the smaller cohort studies
  – Continued follow-up of premarket cohorts
  – Focus Groups
  – Non-PAS explant analyses

• Possibility of Using National Infrastructure
Development of National Breast Implant Registries
Patient Registry and Outcomes For breast Implants and anaplastic large cell Lymphoma etiology and Epidemiology (PROFILE) study

- Covered in NBIR CRADA between ASPS and FDA, with additional participation from manufacturers and NIH.
- To collect data on suspected and/or confirmed cases of ALCL among women with Breast Implants
- Pathology reports reviewed by subject matter expert for case confirmation
- Currently accepting case reports
National Breast Implant Registry

- Collaboration via CRADA between:
  - Food and Drug Administration (FDA)
  - American Society of Plastic Surgeons (ASPS)
  - Manufacturers and Patient Representatives

- To collect data on all subjects who receive breast implants in the US

- Vehicle for:
  - Postmarket Surveillance
  - Post-Approval Studies
  - Device Tracking
  - Quality Improvement
  - Observational Research
  - Patients Contribution towards Improving Outcomes among Women with BI; and information source
National Breast Implant Registry (cont.)

- Collaborators have Identified
  - Surveillance Questions
  - Questions that can be answered with predetermined sample size
  - Questions for evidence review by a third party
National Breast Implant Registry (cont.)

- Intake and re-op Case Report Forms developed
  - Harmonization with Australian Registry
- Data Collection
  - Intake: Procedure data, patient characteristics, device data, physicians data, for all subjects
  - Re-op: reasons, device information, etc.
- Follow-up
  - As needed for surveillance (all enrolled)
  - As needed for specific questions
    - Sub-groups of subjects enrolled in studies
Next Steps

• NBIR Registry expected to be launched this year
  – Methodology for long term follow-up
• Systematic Evidence Review
• PROFILE collecting cases
• Continue process to identify more efficient methodologies to address difficulties with ongoing PAS
Final Remarks

• Strengthening National Infrastructure for Postmarket Surveillance of Medical Devices
  – Communicates timely, accurate, systematic, and prioritized assessments devices throughout their marketed life using high quality, standardized, structured, electronic health-related data;
  – Identify potential safety signals in near real-time from a variety of privacy-protected data sources;
  – Reduces the burdens and costs of medical device postmarket surveillance; and
  – Facilitates the clearance and approval of new devices, or new uses of existing devices
Final Remarks (Cont.)

- Strengthening National Infrastructure for Postmarket Surveillance of Medical Devices: Proposed Actions
  - Establishment of the (UDI) system and promote its incorporation into electronic health information;
  - Promote the development of national and international device registries for selected products;
  - Modernize adverse event reporting and analysis; and
  - Develop and use new methods for evidence generation, synthesis, and appraisal.
• Each stakeholder has important contribution

• Continue collaboration

• Address public health need
Questions?

Nilsa.loyo-berrios@fda.hhs.gov
Resources

• National Medical Device Postmarket Surveillance Plan
http://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CDRH/CDRHReports/ucm301912.htm

• FDA Update on the Safety of Silicone Gel-Filled Breast Implants

• ALCL in Women with Breast Implants: Preliminary FDA Findings and Analyses
http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/ImplantsandProsthetics/BreastImplants/ucm239996.htm

• PROFILE, Investigating ALCL and Breast Implants
http://www.thepsf.org/research/clinical-impact/profile.htm