Australian Society *of* Plastic Surgeons

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Submission to the Senate Community Affairs Committee Inquiry into the role of Government and the Therapeutic Goods Administration (TGA) regarding medical devices, particularly Poly Implant Prostheses (PIP) breast implants.

Terms of Reference

The role of the Government and the Therapeutic Goods Administration (TGA) regarding the approval and monitoring of medical devices listed on the Australian Register of Therapeutic Goods, including:
(a) the TGA's approval, monitoring, withdrawal and follow-up of the Poly Implant Prothese (PIP) breast implants;
(b) the procedures the TGA has in place to continuously monitor relevant information in relation to device manufacturers and sponsors, including the legal or approval issues both in Australia and overseas;
(c) information provided to the Government in relation to the PIP breast implants;
(d) the impact of PIP breast implant failures on Australian patients;
(e) the procedures the TGA has in place to assess the risk to Australian patients if devices available in Australia are the subject of warnings or withdrawals overseas;
(f) the procedures the TGA has in place to communicate device information (including withdrawal information) to the general public, with a focus on affected patients; and
(g) the ability of the TGA to undertake or commission research in relation to specific areas of concern regarding devices, such as metal-on-metal implants.

ASPS

Australian Society of Plastic Surgeons Inc (ASPS) is a not for profit, membership based organisation which aims to maintain the highest standard of surgical practice and ethics in Plastic Surgery in Australia in order to provide the highest quality plastic surgery care to all Australians.

Summary

Many uncertainties remain about the risks posed by the implants and the emerging research. There is a spectrum of opinion and those recommending precautionary removal clearly have a higher level of concern about the risks posed by PIP implants. There is no internationally agreed position in relation to routine, precautionary removal of PIP implants. However, as the science develops, all recommendations require ongoing review. It is clear that the Australian government is undertaking ongoing research on this question and, depending on the outcome; its position may alter in the future.

As at the current date, the available data from batch testing of PIP breast implants by the Therapeutic Goods Administration has not revealed any toxic substances in the gels or any abnormal weaknesses in the implant shells. There are no compelling clinical datasets to warrant a more urgent call to remove these devices. In the event of more conclusively negative findings, ASPS would recommend time frames for a proposed explant strategy. Equally, if more solid data supporting the safety of PIP implants becomes available then longer time frames for explantation could be appropriate.

Importantly there is no international consensus about the recommended lifespan of breast implants. Many clinicians recommend replacement at 10 - 15 years post-implantation because all implants have a minimal rupture rate of approximately 1%-1.3% per annum, hence at least 10%-13% will be ruptured at 10 years.

Key Issues:
Popular press is driving the issue into the conscious mind of the general public here and overseas.

It is unclear whether any of the PIP implants with faulty gels were sold in Australia.

PIP implants had been available in Australia since 1998 from Precise Medical until 2004; Medical Vision then became the agent for distribution in Australia until March 2010 when French authorities discovered non-medical grade silicone was being used in PIP implant manufacture. In April 2010 all unused Australian PIP implants were recalled and an immediate ban placed on their use.

Testing of PIP stocks by the Therapeutic Goods Administration (TGA) failed to identify neither any abnormalities in the tensile strengths of the implant shells nor any toxic components in their internal gels. While many anecdotal reports of an increased rupture rate of PIP implants have emerged there is no strong statistical evidence to support those assertions. Similarly claims have emerged of toxic compounds being identified in the PIP implant gels but none have been identified in gels tested by the TGA

While no hard data exists, the well documented explantation programs proposed in countries such as France, Germany, Czech Republic and Wales, to name a few, have only served to heighten the anxieties of Australian patients with these breast implants.

The lack of a comprehensive, prospectively gathered registry dataset in any of the countries involved, nor from any of the international plastic surgical societies, has severely compromised the formulation of management guidelines for patients with these devices. Many countries including Australia had set up Breast Implant Registries (BIR) following the Dow Corning silicone breast implant class action suit in the early 1990s. These were 'opt-in' registries which have since proved of little value because of their voluntary nature and low capture rates. Some were abandoned through poor design.

Australia's BIR has been maintained since 1998 and has parliamentary privilege. It too has suffered from the same flaws as other countries with 'opt-in' registries as a result of very low capture rates. The PIP situation has been the first opportunity to validate the Australia BIR data; in the knowledge that 12, 341 PIP implants were sold, the BIR captured less than 4% of these. Not only was the registry's 'opt-in' design at fault but each patient was levied a fee to be included in the BIR thereby compounding the disincentives to participate.

Known Facts:
<u>Ruptures</u>
Most breast implants will eventually rupture; in general terms implants will last about 10 – 15 years with a low rupture rate of 1%-1.3% per year. Between 11 and 20 years most will rupture and after 20 years few will still be intact. Significantly high rupture rates of these devices has been known for many years with 20% ten year rupture rate and 50% 15 year rupture rates reported in 1998.

<u>Imaging</u>
To monitor breast implants, MRI is highly accurate in identifying ruptures with high sensitivity and specificity. The imaging of choice for "standard" international practice for assessment of breast implant integrity is MRI. Ultrasound is less sensitive and less specific. The MRI study is non-invasive,

does not involve an injection, and takes approximately 25 minutes to perform. The MRI allows for assessment of implant rupture and peri-implant complications. The results will assist in surgical explant. Technological infrastructure of magnet and dedicated breast coil are required at sites performing MRI.

Explantation

The governments of several countries are planning mass explantation surgical programs; priority will be given to cancer patients with implant based reconstructions with regard to re-implantation. The UK government has offered a selective explantation program for those patients who were managed under their National Health Scheme but not the bulk of those patients who had PIP implants inserted privately.

Anxiety

The level of patient anxiety in this situation must be closely considered. Seemingly conflictual reports from other countries and unclear guidelines will only serve to increase the anxiety of patients who received PIP implants in good faith with the assumption they were manufactured to rigorous standards. This is a worrying time for patients.

Clinical Reports

From data collected by ASPS, and provided to TGA, several Australian plastic surgeons (and surgical colleagues) have independently supported the evidence that ruptured PIP implants' gel cohesivity has been reduced to an almost fluid consistency and at explantation a milky fatty liquid surrounds the implants and appears to delaminate the outer shell from the gel. To date this fluid, although appearing purulent has been sterile.

Unknown Factors

- It is unknown if faulty gel was used in PIP implants imported into Australia (none have been identified by TGA testing to date);
- It is unknown if the actual rupture rate of PIP implants is different to other comparable devices (there is much anecdote written about increased rupture rates but little hard evidence);
- It is unknown if a PIP implant rupture can be accurately determined using clinical examination alone unless there is obvious deformation;
- It is unknown if the implanted life of a PIP implant is as long as expected of other implants (approximately 10 – 15 years).

Assumptions:

A consequence of a lack of solid data, such as Level 1 or 2 evidence, is that assumptions must be made based on clinical experience, and anecdotal reports from local, national and international colleagues; at best Level 4 or 5 evidence.

These assumptions are made as at the date of this document and based on evidence available at the time. ASPS may review these assumptions in the future.

Assumption 1: Ratio of Cosmetic: Reconstructive patients = 80: 20
i.e. of the approximately 12,500 implants 10,000 would be cosmetic and 2,500 would be reconstructive.

Assumption 2: Industry standard silicone implant rupture rates are 10%-13% at10 years.

Assumption 3: If a PIP implant has an extra-capsular rupture, its removal is strongly recommended as soon as practicable. (An extra-capsular rupture refers to the migration of silicone beyond the fibrous layer, or capsule, around the implant.)

Assumption 4: If a PIP implant has an intra-capsular rupture, its removal is recommended on a non-urgent basis. (An intra-capsular rupture means that silicone gel has escaped from the implant shell but has been contained within the fibrous layer, or capsule, around the implant.)

Assumption 5: Implants for reconstruction have higher complication rates than implants for cosmesis.

Assumption 6: If a PIP implant has been used to reconstruct a breast after a mastectomy for breast cancer, it should be removed and an alternative implant inserted.

Assumption 7: A PIP implant that is demonstrated intact on MRI can be safely monitored clinically and with MRI. (MRI is magnetic resonance imaging and does not involve harmful x-rays.)

Recommended:

i. PIP breast implant patients should be clinically examined by their surgeon after referral from their general practitioner. This review will establish the date and details of their implant surgery and assess for any clinically relevant problems.

ii. Patients will be prioritised into 3 groups:
   - Explantation as soon as possible if evidence of extra capsular rupture from MRI examination.[1]
   - Non-urgent explantation if evidence of an intra capsular rupture from MRI, or if the patient has anxiety not alleviated by reassurance.
   - Monitoring until 5 years post implantation with clinical and/or radiological examinations on a 6 month basis for surgeon review or an "as needs" basis for general practitioner review.

The way forward – National Breast Device Registry ('opt out')

It is impossible to design an implantable medical device with zero risk of failure therefore effective safety monitoring is essential to protect public health.[2] The PIP situation has created an important opportunity to leverage large clinical registries for monitoring device safety.

- Science tells us what we can do.
- Guidelines tell us what we should do.
- Registries tell us what we are actually doing.[3]

[1] We note the announcement by the Minister for Health and Ageing, the Hon Tanya Plibersek MP, on Saturday 10 March 2012 in relation to the availability of Federal funding for MRI scans, for one year, for recipients of PIP implants.
[2] Resnic & Normand, New England Journal of Medicine 2012. Feb 14
[3] Ralph Brindis, MD, MPH, FACC. Past CMO & Chair, ACC National Cardiovascular Registry.

The 1980s-1990s saw a major breast implant controversy which resulted in a USD3 billion lawsuit. There was insufficient data at the time of that controversy to make definitive decisions. Subsequent epidemiological evidence showed that there was no causal association between breast implants and cancer, offspring defects or neurologic disease.

Breast implant registries were spawned in many countries including by our Society in Australia in 1998.

History has a way of repeating itself. The PIP situation showed us that less than 4% PIP implants were recorded on the registry. This has resulted in insufficient data to make definitive explant recommendations based on solid evidence.

It is now clear why the current breast implant registry and its international counterparts have failed.

The common design flaws are:

- Opt-in (optional)
- Cost to patient
- Complex data set
- No validation
- Inefficient information transfer
- Privacy concerns
- Inactive clinical involvement

Whereas, the ideal registry is:

- Opt-out
- No cost to patient
- Simple but uniform data set
- Epidemiologically sound data
- Efficient data collection, storage and retrieval
- De-identified secure data
- Proactive clinician-driven technical reference group

In March/April 2010 when the news broke about the PIP company's use of industrial grade silicone, ASPS was quick to alert all members. We also contacted the major supplier of PIP implants and their sales figures were released to allow us to validate the capture rate of our BIR. This was surprisingly low; in fact less than 4% of PIP implants were encoded into the BIR. This led us to examine the effectiveness of our registry that had been in place since 1998, coincidentally the introduction date of PIP implants.[4]

We explored other registries in Australia and discovered that the AOA's National Joint Registry had a 99% capture rate which prompted us to review the design and capability of our BIR. We also reviewed all other BIR's internationally and found that virtually all of them were opt-in registries which meant they were optional, not mandatory. Several had already been abandoned due to their ineffectiveness. Successful registries like the AOA's were of an opt-out design which meant that unless a patient actually objected to being included their data was captured. Opt-out registries are

[4] Amy E Jeeves and Rodney D Cooter. "Transforming Australia's Breast Implant Registry." Med J Aust 2012; 196 (4): 232-234.

much more rigorous and are extremely expensive to set up and maintain but the data is much more robust and useful.

With that in mind we set out to redesign our Registry into an opt-out format and chose as our collaborators the Monash University's Dept of Epidemiology and Preventive Medicine which have a vast experience in maintaining international best practice registries. Over the past twelve months we have been developing our minimum dataset forms and other forms for the new registry which we have called the Breast Device Registry (BDR) to encompass all reconstructive aspects of implant surgery (i.e. tissue expanders and implants) as well as cosmetic implants.

We are at the pilot study phase of the project with Ethics approval to trial our new Registry at three independent hospitals.

In December 2011, when the PIP situation re-emerged our international colleagues in several countries began to realise how ineffective their existing breast implant registries were and have now begun to focus on our new model. This is an exciting time because there is a collective will to align our minimum datasets internationally.

Australia is leading the world in terms of the development and design and dataset for an effective national Breast Device Registry.

We are actively promoting and sharing the new opt-out Breast Device Registry (BDR) design and dataset with international clinical colleagues and government agencies, such as FDA, to facilitate internationally comparable data.

To this end, the President of ASPS, Associate Professor Rod Cooter, gave a presentation of the new BDR and its simplified dataset at the American Association of Plastic Surgeons (AAPS) 91st annual meeting, San Francisco, April 14-17, 2012. He will also present the BDR to the Presidents of fourteen counterpart national plastic surgery societies at the influential Global Leadership Forum, American Society of Plastic Surgeons, in Munich, on 24 May, 2012. At the American Society of Plastic Surgeons' annual meeting, New Orleans, October 26th, 2012, Associate Professor Rod Cooter will be part of a panel of experts, including a scientist representing the FDA, to discuss international cooperation, in response to PIP situation, to facilitate international cooperation and data sharing in relation to breast devices.

Conclusion:
Patient safety and the need for quality assurance around implantable devices is our major driver for the establishment of a breast device registry.

The Australian Commission on Safety and Quality in Health Care has drafted national arrangements, including data and clinical governance, for Australian clinical quality registries.

The TGA has expressed the need for effective device registries as a means of collecting and analysing clinical data.

Working with the experienced registry team at DPEM, Monash University, we are now ready to develop a roll-out plan for a national Breast Device Registry.

Government funding for an opt-out or virtually compulsory Breast Device Registry, to capture all future implanted breast device data, is an essential requirement to ensure the BDR is available to all Australians and that we have, this time, learned the lessons of the Dow Corning and PIP situations.