EDITORIAL
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THE STATE OF BREAST RECONSTRUCTION IN AUSTRALIA: CHALLENGES AND OPPORTUNITIES

O estado da reconstrução mamária na Austrália: desafios e oportunidades

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This editorial is from the perspective of an American breast surgeon that immigrated to Australia four years ago. As the former Chief of Breast Surgery at a 750- bed hospital in Texas that treated 350 new breast cancer diagnoses a year, she was accustomed to accessing all aspects of reconstructive surgery through a large department of plastic surgery. The following are her opinions, observations and experiences in providing breast reconstruction in the US and Australia. Her point of view is both personal and professional; while providing evidential data to understand current challenges and opportunities for breast reconstruction in Australia.

Breast cancer surgery and reconstruction trends

Breast cancer is the most common cancer affecting women globally. Similarly, in Australia, approximately 18,235 new cases will be diagnosed in 2018. Of those diagnosed, less than half (48%) will have undergone a mastectomy for surgical management. It is well known that breast conserving surgery followed by adjuvant radiation therapy is as effective in survival as a mastectomy for women with early stage breast cancer. Despite having similar survival rates and early detection, many women still elect, or are advised, to have mastectomy by their physician.

Studies have demonstrated that breast reconstruction contributes to improving quality of life, as well as psychological recovery after mastectomy. Similar rates of patient satisfaction are also reported in studies comparing mastectomy with reconstruction and breast preservation. Despite these promising trends, the current rate of breast reconstruction in Australia is 8–12%[1], considerably lower than their western counterparts in the US or the UK. One in ten women in Australia will undergo breast reconstruction, in comparison to 3 in 10 in the UK and 5 in 10 in the United States. Is it unreasonable to compare breast reconstruction trends between Australia, the United States and the UK?

HEALTHCARE SERVICE DELIVERY CHALLENGES

Land mass and population

To gain a better perspective, the geographical size of the United States is approximately 9.8 million km^2 and Australia is 7.7 million km^2. Although the size in land mass is nearly comparable, US population is approximately 320 million; while Australia's population is less than a tenth of the U.S., at 27 million, (smaller than the state of Texas). While Australia and the U.S. deliver healthcare to large populations spread over millions of kilometers and miles, the UK faces the challenge of population density in providing care to 65 million people spread over 242,000 km^2. In being the most arid inhabited continent in the world, Australia's population is distributed more widely along coastal areas affording access to water. What may be surprising to many is the lack of water in the middle of the country, and the potential for severe droughts every 18 years limits residential opportunities. As these data points suggest, each country faces unique challenges in addressing accessibility.

As one can imagine, Australia's geographical landscape is unique and presents a significant challenge in providing access to healthcare services for those who live or work in remote regions.

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Barriers to breast reconstruction

Immigrating to Australia, where more skilled healthcare professionals are needed to provide care in remote areas, didn't seem too intimidating, after spending 7 years working on the island of Kauai, Hawaii, with limited resources (no adjuvant radiation nor stereotactic biopsy capabilities). What became apparent was that one develops a more grounded perspective of the issues, challenges, or barriers that impact access, and more importantly, the choices patients make about their treatment options.

A recent review by Roder et al.[2], showed that mastectomy rates vary across demographic and geographic areas. Mastectomy was found more prevalent in regional remote locations and lower socio-economic areas. It is unclear whether lack of resources, such as access to radiation treatment, was a contributing factor. It also indicated that surgeons with low breast cancer surgical caseloads were more likely to perform mastectomy[2]. Not all surgeons who perform mastectomy have training and expertise to perform oncoplastic surgical techniques, especially in remote areas. The Breast Surgeons of Australia and New Zealand (Breast Surg ANZ) is an organization committed to breast subspecialty training with exposure to a broad range of reconstruction techniques. Members are required to participate in compulsory audits to maintain quality assurance and offer the best available breast cancer care[1]. Unfortunately, many newly trained oncoplastic breast surgeons choose to reside in metropolitan areas despite a lack of surgical employment opportunities for them. This is one area that can be improved. For example, incentivizing young breast surgeons to work in remote areas of need would provide needed services and maintain their skills, while gaining mentorship during the early phases of their surgical career.

Adequate access to information

The Breast Cancer Network Australia (BCNA) conducted a breast reconstruction survey in 2012 to identify barriers for women seeking access to breast reconstruction. One of the findings was that some women surveyed found it difficult to access general information about breast reconstruction[3]. In the US, Alderman et al.[4] reported that when women are provided adequate information concerning their breast reconstruction options, they were more likely to consider mastectomy and immediate reconstruction when appropriate. BCNA reported 10% of women surveyed did not have discussions about breast reconstruction, nor were they offered breast reconstruction as a post-mastectomy option. Others reported feeling overwhelmed by their cancer diagnosis and unable to adequately consider reconstruction options if offered[3].

What we may underestimate is the role a surgeons' attitude towards breast reconstruction can play in significantly influencing a woman's choice[4]. Education for breast cancer treatment options that allows patients to make an informed decision is important. Many patients are justifiably fearful. However, with medical professionals providing appropriate information as well as reasonable time for the patient to reflect on their options, we can (and should) reduce fear-based decision making. It is well understood that a successful breast reconstruction starts with a good mastectomy. Regardless of a surgeon's ability to perform a reconstruction, discussions and collaboration with an oncoplastic surgeon prior to mastectomy provides the best possible oncologic and aesthetic outcome for the patient, if that is the patient's preference.

Access to affordable healthcare

Another obstacle that women can encounter is having access to affordable and timely healthcare. For example, despite differences in geography, terrain and population density, the need for access to adequate care continues to be a stalwart issue for the U.S. as well as Australia. Unlike the US, however, Australia has the benefit of both a private and public healthcare system which should (*in theory*) provide greater access to care. In the US, breast reconstruction is a mandated right (Women's Health and Cancer Right's Act-1998). And, despite a lack of universal healthcare, the costs for breast reconstruction in the US are growing as more women elect this treatment option. When considering healthcare costs in Australia, the BCNA survey identified high out of pocket costs ranging from $ 5,000-15,000 for private patients beyond the health insurance coverage. For patients choosing to have care through the public system, waiting lists times can range from 12-48 months. Immediate breast reconstruction at the time of mastectomy, when appropriate, could reduce costs and wait times.

There have been concerns that immediate breast reconstruction may delay adjuvant treatments which would then impact survival. Evidence demonstrates the contrary: that surgical complications are not necessarily greater for women who choose breast reconstruction compared to no reconstruction[5]. Furthermore, it has been shown that the aesthetic outcomes and psychologic benefits are greater when comparing immediate reconstruction and delayed reconstruction. Not surprisingly, interest and requests for immediate breast reconstruction are increasing.

OVERCOMING HURDLES TO ACCESS

Although there are many challenges including costs and the need to train more breast surgeons with a broad range of skills, *educating women about breast cancer treatment options (including breast reconstruction) continues to be one of the greatest hurdles*. In Australia, there is an increasing awareness of the need to improve access to breast reconstruction for women who have the desire to be restored. Utilizing contemporary technology such as telehealth and Skype are just a few examples of more effective ways to distribute knowledge and education to patients. And today there are more breast reconstruction training programs. But until there are incentives that encourage remote employment, more research and an

investment in teaching opportunities, access to contemporary breast cancer care will remain elusive. In his dialogue, Republic, Plato said, "Necessity is the mother of invention." The need to expand breast reconstruction services in Australia encourages creative efforts to increase accessibility for all women regardless of geographic and demographic factors.

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