Trends in Immediate Breast Reconstruction

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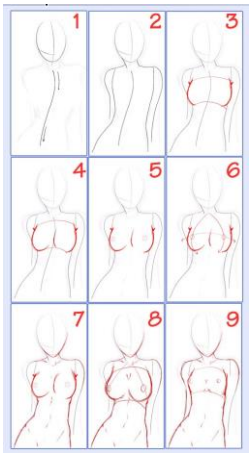

Architecture is art, a phenomenon of emotions, which remains outside and beyond the construction issues. The purpose of the construction is to keep things together and of architecture is to delight us.

Le Corbusier.

The immediate reconstruction after a mastectomy is a relatively recent fact. At the end of the 1980's, most of the reconstructions should wait at least three to five-year of relapse-free period to be completed. This indication was gradually modified, until less than a decade later the immediate reconstruction became more and more frequent. In Venezuela, this new indication was developed in a robust way thanks to the work and the school of magnificent plastic surgeons in the Instituto de Oncología Luis Razetti and Hospital Padre Machado of Caracas as José Rafael Troconis, Ana Hollebecq and José Luis Saboin, among others. Initially limited to the use of conventional implants with or without cutaneous expanders, the realization of a pedicled *Latissimus dorsi* flap either with a Transverse Rectus Abdominis Myocutaneous flap, TRAM flap, now has one greater number of technical options, and it has become an increasingly common procedure at the need for a mastectomy.

In a review in the Instituto de Oncología Dr. Luis Razetti (IOLR) in Caracas posted in the *Revista Venezolana de Oncología* in June 2014, between January 2000 and December 2012, 225 patients were reconstructed and in 162 patients (79%), the reconstruction was carried out immediately. The most commonly used technique was the reconstruction with Latissimus dorsi (LD) in 128 patients (79%), followed by the TRAM flap in 31 patients (19%) and reconstruction with prosthetic implant in 3 cases (4.8%).

Similarly, in a series retrospective entitled *Trends in Immediate Postmastectomy Breast Reconstruction in the United Kingdom* published in September 2015 in the *Journal of the American Society of Plastic Surgeons*, Daniel L. Leaf and collaborators of the Department of BioSurgery and Surgical Technology, Imperial College and The Breast Unit of the Royal Marsden NHS Foundation Trust in London, United Kingdom also focused on assessing trends in immediate breast reconstruction (IBR) in the Centre of

Oncoplastic of the Royal Marsden NHS Trust, (CORM/NHS) between 2003-2013 and nationwide between 1996 and 2013.

The first result that stands out is a marked decrease in immediate reconstruction with the use of any technique involving *Latissimus dorsi* muscle (LD). Of 125 immediate breast reconstruction performed, 70 of them, i.e. 56% cases, LD was used in the CORM/NHS for the period between 2004-2005. For the period between 2009-2010, LD was held in 18 of 155 (11.61%) reconstructions and 2 of 176 (1.13%) reconstructions in the period of 2012-2013. This marked downward trend, is contrasted by an increase in the use of reconstructions exclusively with implants/expanders or with autologous abdominal flaps, especially the Deep Inferior Epigastric Artery Perforator (DIEAP-ra), which has almost completely replaced the TRAM flap conventional. For the period 2004-2005, 35 and 11 reconstructions of 125 used the technique of implant/Expander and DIEAP-ra, i.e. by 28% and 8.8% respectively. On the other hand for the period 2012-2013, there were 98 procedures with implant/Expander and 67 with DIEAP-ra, a total of 176 reconstructions with 55% and 38%, respectively.

The results of this Center were compared with data derived from the National Hospital Episode Data, covering all oncoplastic surgery units of England. One of the most interesting findings is that the number of immediate reconstruction increased from 8,389 procedures in 1996 to almost doubled to 16,430 interventions in 2012. In the analysis of the type of procedures, the reconstruction with implants/expanders is maintained as the technique most widely used nationwide, representing 85% of the procedures performed during the evaluated time period. The longitudinal trend analysis shows that reconstruction with the use of DIEAP-ra in other centres have been increasing at an almost imperceptible rate, compared with that recorded in the CORM/NHS. For 1996 the 0.44% of the reconstruction was carried out with DIEAP-ra compared with 2.76% in 2012.

The exclusive use of implants continues as the technique more diffused with a very discreet downward curve, with 95.42% in the year 1996 and 84.92% in 2012. This trend has been recognized in a similar way in the United States, probably influenced by greater efficiency in the use of the operative time and the inclination of women to prefer faster forms of reconstruction, with less technical demands and best profile of tolerance, especially related to the donor site morbidity. Likewise the steady rise in the number of bilateral mastectomies has increased the use of reconstructions by using of implants. Another key aspect to the authors in this increase is the difference in fees that perceives a plastic surgeon in each case. For example, in United States a specialist in reconstructive surgery receives an average of US $ 587 per hour in a procedure exclusively with implants instead of $ 322 per hour in a reconstruction with autologous tissue.

The advance in the technology of implants/expanders, the use of *Acellular Dermal Matrices* and the optimization of the technique of microvascular anastomosis will surely result in a further decline in the use of the myocutaneous flap of Latissimus dorsi, the noble workhorse battle of the reconstruction in the United Kingdom and also in Venezuela. Today this technique is kept below 10% in the preferences of the British

plastic surgeons. However, it still has an important role especially in patients who smoke, diabetic, low abdominal adipose panniculus or those with surgical background that contraindicate autologous abdominal flap. In addition this technique remains in effect because it is still the preferred technique in coverage of large skin defects in extensive resections, or when other methods of reconstruction have failed.

Follow closely the changes in trends is one of the best tools that have high-performing institutions. It is no doubt that to be up to date we need to get to know, for example an updated therapeutic scheme, commonly called *State of Art.* But a pattern of treatment is an aspect in a static way that only will change every time you update this guideline. Instead watch a tendency, as these two teams of investigators have done, is a dynamic element that means deliberately to be placed in a point of view to see where the medium-term therapeutic conduct performance and preferences are directed. Studying the State of art is to know for sure where the ball stands, while intelligently analyze a trend is to anticipate where the ball will drop following the pitch.

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