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EDITORIAL – BREAST ONCOLOGY

The Oncoplastic Frenzy: Beware the Swing of the Pendulum

Krishna B. Clough, MD[1], and Ineke Meredith, MBChB[1,2]

[1]The Paris Breast Centre - L'Institut du Sein, Paris, France; [2]Wellington Regional Hospital, Wellington, New Zealand

The Law of the Instrument
…"To a man with a hammer, everything looks like a nail…"

We read with great interest the editorial from Dr Mel Silverstein on "Oncoplastic Breast Surgery: From Oblivion to Mainstream",[1] which was recently published in *Annals of Surgical Oncology*. We applaud his commitment to improving patient outcomes and admire his investment. That he trained in an 'Halstedian' era and has been so dynamic throughout his career such that he is a world-recognized oncoplastic breast surgeon is remarkable. Dr Silverstein is a key leader in breast surgery, and is responsible for the institution of Oncoplastic Breast Surgery (OPS) in the US.[2] We have been friends for more than 25 years and we thank him for referencing the innovative work of Dr Krishna B. Clough in his editorial. It is on this mention that we would like to take the opportunity to reply.

THE BEGINNING

In the 1980 s, two European surgeons—Dr Werner Audretsch in Dusseldorf and Dr Krishna B. Clough in Paris—started incorporating plastic surgery techniques at the time of breast cancer excision to obviate the frequent mutilations resulting from wide tissue resection in breast-conserving surgery (BCS). In 1990, Dr Clough published the first papers on the use of mammoplasty for breast cancer.[3,4] The term *Oncoplastic Breast Surgery* (OPS) was then coined by Dr Audretsch[5] These initial publications were introduced for lower pole tumors, for which the risk of deformity following large resections was the highest. We then extended OPS to all quadrants, developing site-specific quadrant-per-quadrant mammoplasty techniques.[6] We also proposed a stratification of OPS techniques in two categories: level 1, that all breast surgeons should be able to offer, and level 2, which requires more specific OPS training.[6] It is our honor that in the consensus definition of OPS, the American Society of Breast Surgeons (ASBrS) has endorsed our classification.[7]

THE NOW

One must recall that the evolution of OPS was premised on the observation that for a proportion of women, BCS was destined to fail. Specifically, these were women with large tumor sizes relative to the size of the breast, for which BCS could neither achieve negative margins nor preserve the natural shape and appearance of the breast.[6] These are therefore women who lie at the border of conservability, and for whom a mastectomy would usually be recommended.[8]

The recent abundance of OPS literature could suggest that its implementation is widespread and that it is the minority of breast cancers that should be treated with simple BCS. We are alarmed, should this be the trend. OPS has been used and taught in France for more than 20 years. In 2015, we initiated a nationwide survey of French teaching hospitals performing oncoplastic surgery. We reported a nationwide mastectomy rate of 29% and a BCS rate of 71%, of which 13.9% was level 2 OPS.[9] Importantly, this demonstrated that level 2 OPS is required in the minority, with the average rate lying somewhere between 10 and 15% in expert OPS centers.

We are surprised that in some series the rates of level 2 OPS have increased dramatically over time, with units reporting that 30–50% of women undergoing breast conservation will have OPS.[10–12] However, most reports do not regard the increased complication rates attached to mammoplasty and the risk of delays to adjuvant treatment.[13] Contradictorily, it is striking that in most parts of the world where these techniques are being used, national

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K. B. Clough, MD
e-mail: krishna.clough@orange.fr

breast-screening programs are well-established, and therefore the larger proportion of breast cancers are likely small enough to be managed with simple BCS.

There are two limitations to interpreting reports on the use of OPS in the recent literature:

1. *Definition* Level 1 and 2 oncoplastic techniques are often categorized uniformly, however we maintain that this should not be the case. We believe that the vast majority of patients benefit from simple level 1 reshaping techniques, whereas most patients do not need level 2 techniques, i.e. major volume-reducing mammoplasties. This should only be performed in the minority and in experienced hands. OPS rates of up to 50% are likely due to the classification of simple nipple medialization and mammoplasty under a single umbrella. It is for this that we commend the ASBrS in their attempt to better define oncoplastic surgery, improving dialogue between patients and surgeons.
2. *Oncoplastic or Oncocosmetic Surgery?* OPS reports for small tumors suggest that the concept of 'oncoplastic surgery' has extended to include 'oncocosmetic surgery'. We previously defined oncocosmetic surgery as breast reduction necessitated by cosmetic and/or functional reasons, and not oncological. In 2018, we reported that only 12% of patients undergoing mammoplasty at the Paris Breast Centre were for cosmetic reasons.[13]

The pendulum is swinging quickly. We are witnessing a wave of 'oncoplastic hedony', as evidenced by the increasing literature and the multiplication of oncoplastic courses. One must fear that this results in an inappropriate extension of OPS indications to patients who might be perfectly served by standard BCS and appropriate level 1 techniques.

THE FUTURE

We recently published 10-year results on a series of 400 level 2 oncoplastic mammoplasties,[13] and we stress the importance of publishing complication rates and long-term results, always cognisant that the primary goal for these women is oncological safety.

The increasing enthusiasm for OPS has given birth to Oncoplastic Breast Surgery Fellowships across the world, including the UK, France, Australia and New Zealand, as well as the US. This is indeed a major step towards improving the management of patients requiring level 2 OPS, but we reiterate that this is only a minority.

We compliment Dr Silverstein for his work, and applaud his crusade to increase visibility of OPS. But beware the swing of the pendulum. Although level 2 OPS is an essential tool in the surgical management of breast cancer, most patients, especially those with early-stage breast cancer, will be perfectly treated with standard BCS incorporating simple level 1 OPS.

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