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LETTER TO THE EDITOR

The need to diminish mastectomy rates in patients with breast cancer eligible for breast conservation

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Dear Editor,

I would like to bring attention to a topic of increasing interest in modern breast practice. Recent reports have shown that rates of mastectomy are on the rise in western countries [1]. This phenomenon would be seen as a contradiction for several reasons. In fact, the diagnosis of small and non-palpable tumours has become increasingly frequent by virtue of mammographic screening and breast cancer awareness among women. As a consequence, breast-conserving surgery can be considered as the treatment of choice in most cases. Moreover, the new techniques of oncoplastic surgery permit to perform breast-conserving treatment in some patients otherwise candidates to mastectomy [2]. However, there is now a shift from breast conservation toward a more aggressive approach, such as mastectomy, in a moment in which surgical treatment of solid tumours is becoming less invasive and targeted according to patients and tumours characteristics.

Rising mastectomy rates have been especially observed in the US. In a recent study evaluating data from the US National Cancer Database, an increase by 34% of mastectomies was reported in women eligible for breast conservation. The European situation, in this regard, is less defined [3]. A paper from EUSOMA, which still represents the largest study addressing the issue of mastectomy trends in European countries, reported a decrement of mastectomy rates from 31.8% in 2005 to 13.1% in 2010 [4]. However, this study has some limitations and barely can be considered representative of the whole European scenario. In a recent study from our academic Institution, including 2315 patients with early breast cancer, we observed no substantial changes in rates of mastectomy that passed from 38.3% in 2002 to 39.8% in 2016 [1].

Undoubtedly, breast surgeons have to deal with an increasing number of patients candidates to breast-conserving surgery who instead request a mastectomy for the treatment of their tumour. The reasons behind this phenomenon are various and complex. One of them is the growing availability of immediate implant reconstruction after mastectomy in most breast centers. This trend is well documented in the literature; in our experience, immediate implant reconstruction passed from 12.2% in 2002 to 62.7% in 2016 [1]. In this regard, patients should always be precisely informed about the risks and possible sequelae of such an approach, especially when mastectomy is not strictly necessary and breast-conserving surgery would be the option of choice. The use of nipple- and skin-sparing mastectomy techniques has grown in the last decade and leads to satisfying aesthetic results. Although survival data based on long-term follow-up are not still available, sufficient evidence exists in favor of oncological safety of those surgical procedures. Nonetheless, surgeons and patients should be aware of the fact that nipple sparing mastectomy, in particular, needs to be restricted to selected patients [2].

Another reason that led to rising of mastectomy rates can be identified in the increasing use of preoperative MRI [1, 2]. MRI in breast practice was initially introduced for special situations, but its use has spread rapidly in recent years and nowadays, it is applied preoperatively for many patients with both in situ and invasive cancers. While preoperative MRI has a high sensitivity in discovering additional tumours invisible on both mammography and ultrasound, on the other hand it has a low specificity that can lead to supplementary biopsies for benign lesions as well as to unnecessary mastectomies. In general, preoperative MRI requires a judicious use and should be carried out in selected cases, according to the current guidelines.

Another issue that deserves attention is the patients' entitlement to choose their preferred surgery option. Studies

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have highlighted that some patients choose a mastectomy in place of a breast-conserving surgery because of worry about cancer recurrence, and perceived consequences of breast-conserving treatment. Anxiety and disinformation sometimes push the patients to erroneously consider mastectomy as a more safe procedure in terms of oncological outcomes. On the contrary, recent studies pointed out possible survival benefits in patients with early breast cancer undergoing breast conserving surgery compared to those treated with mastectomy. A recent report from the Netherlands Cancer Registry on 129,692 patients found better long-term breast cancer-specific survival for breast conservation than mastectomy [5]. Similar data were reported from other cohort studies.

Demographic factors, education, personal and familial history of breast cancer may influence patients' opinion regarding their treatment. An increased likelihood of undergoing mastectomy is commonly seen age groups under 40 or 50 years. In this regards, the current EUSOMA guidelines have pointed out that surgical treatment of young patients with early breast cancer, while being tailored to the individual patient, should in general not differ from that of older patients.

For patients in whom breast-conserving therapy represents the suitable option, breast surgeons should suggest mastectomy and reconstruction only when breast-conserving surgery is considered as inadequate to reach satisfying aesthetic results. Central to the decision-making process is also the role of the multidisciplinary team as whole that is supposed to take a decision and support patients in playing an active role in their disease management. The choice of mastectomy from patients suitable of breast-conserving surgery is not per se a wrong choice, but such a decision should be taken after proper considerations of oncological and aesthetical issues.

Compliance with ethical standards

Conflict of interest The author declares that he has no conflict of interest.

Research involving human participants and/or animals All procedures performed in the studies mentioned in the manuscript involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent Not applicable.

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