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ORIGINAL ARTICLE

Preoperative imaging prior to breast reconstruction surgery: Benchmarking bringing together radiologists and plastic surgeons. Proposed guidelines

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Summary
Background. — Prescription of preoperatory imaging assessment prior to planned breast reconstruction surgery (reduction or augmentation mastoplasty, correction of congenital breast asymmetry) is poorly codified. The objective of this study was to analyze the attitudes of French radiologists and plastic surgeons with regard to prescription of preoperative imaging in the framework of non-oncologic breast surgery.
Material and methods. — This is a descriptive and comparative observational study involving two groups, one consisting of 50 plastic surgeons (P) and the other of 50 radiologists (R) specialized in breast imaging. A questionnaire was handed out to radiologists during a conference on breast imaging at the Institut Gustave-Roussy in Paris (France) held on 17th December 2012. The same questionnaire was handed out to plastic surgeons at the National Congress of the French Society of Plastic and Reconstructive Surgery (SOFCPRE) held on 19th, 20th and 21st November 2012, also in Paris (France). The questionnaire focused on prescription of preoperative and postoperative imaging evaluation for non-oncologic breast surgery in patients with no risk factors for breast cancer or clinically identified indications.

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Results. — Forty-six percent of the plastic surgeons considered an imaging exam to be recent when it had been carried out over the previous 6 months, while 40% of the radiologists set the figure at 1 year. Clinical breast density exerted no influence on 92% of the plastic surgeons and 98% of the radiologists. A majority of the plastic surgeons would prescribe a preoperative exam regardless of age (57% for breast reduction, 61% for breast implant placement and 61% for surgical correction of asymmetry) while the radiologists would prescribe exams mainly for patients over 40 years (50% for reduction, 44% for augmentation, 49% for asymmetry correction). The plastic surgeons would prescribe either ultrasound or mammograms (59% for reduction, 72% for augmentation, 66% for asymmetry correction) while radiologists would usually prescribe mammograms (64%, 57%, 64%). Most of the radiologists, along with the plastic surgeons, did not think that postoperative examination is justified (58% of P and 62% of R for reduction, 56% P and 68% of R for augmentation, 52% of P and 64% of R for asymmetry correction).
Conclusion. — In 2012, there existed no French consensus on prescription of a preoperative imaging assessment in the framework of non-oncologic breast surgery in patients without risk factors for breast cancer. Active cooperation bringing together radiologists and plastic surgeons is likely to facilitate the harmonizing of their respective practices. In this paper, we propose guidelines that could help them to synchronize their efforts.

Introduction

A review of the literature fails to show a consensual attitude with regard to performance of preoperative imaging assessment prior to breast surgery in patients not presenting any particular risk factor for breast cancer. In France, the only commonly accepted recommendations [1—3] involve systematic mammography every 2 years from the age of 50. On a European scale [4], in the framework of augmentation mammoplasty by implants for patients not presenting a risk factor for breast cancer, expert opinion has proposed a preoperative imaging assessment including bilateral mammary ultrasound before the age of 35 years and a mammogram from the age of 35 in women not presenting a risk factor for breast cancer, but these kinds of proposals, which arise from the advice given by experts, cannot be considered as actual recommendations, and we have found no recommendations at all pertaining to mammary reduction surgery.

The objective of this study is to compare the attitudes of two categories of practitioners, that is to say plastic surgeons and radiologists, and thereby evaluate prevailing professional practices with regard to prescription of preoperative imaging assessment in the framework of non-carcinologic breast surgery (mammary reduction, mammary augmentation by implant placement, mammary asymmetry correction by reduction of contralateral breast and/or implant placement) in patients not presenting risk factors for breast cancer. The goal of this article is to present the results of this comparative study, to put them into perspective relative to the data reported in the literature, and to attempt to propose guidelines that could effectively contribute to harmonization of the relevant practices.

Material and methods

We carried out a descriptive and comparative observational study including two groups, one consisting in 50 plastic surgeons and the other in 50 radiologists specialized in senology. A questionnaire was handed out to the radiologists specialized in senology at a conference on breast imagery held on 17 December 2012 at the Gustave-Roussy institute in Paris (France). It had already been handed out to the plastic surgeons at the National Congress of the French Society of Plastic and Reconstructive Surgery (SOFCPRE) held on 19th, 20th and 21st November 2012, also in Paris. It covered the practice of preoperative and postoperative imaging assessment in breast surgery such as reduction mammoplasty, augmentation by implant placement and mastopexia. The questionnaires were anonymous, and those received and completed by the radiologists and the plastic surgeons were the same. Only practitioners having successfully presented their theses with a degree in specialized studies of radiology or plastic surgery were allowed to participate.

The questionnaire contained no queries pertaining to breast reconstruction, to correction of tumorectomy sequels or to mammary transfer of autologous adipose tissue. It was limited to patients presenting neither a risk factor for breast cancer nor a clinically identified indication such as mastodynia or suspicious nipple discharge.

When interrogating the radiologists and the plastic surgeons, we attempted to define the age starting from which practitioners systematically prescribed preoperative imagery evaluation for patients not presenting a specific risk factor for breast cancer. In addition, we made a point of specifying the time lapse at the end of which, breast imaging was considered non-recent, which meant that a new preoperative prescription was deemed justified. According to type of breast surgery, (reduction or augmentation by prosthetic implant, correction of mammary asymmetry), the questions were reframed in view of identifying the interest of preoperative and postoperative breast imagery and of determining the extent to which clinically assessed mammary density was brought to bear on the imagery prescription. As concerns augmentation mammoplasty by placement of prosthetic implant, we wished to see whether preoperative imagery prescription was affected by the surgical approach, by the position of the implant (pre- or retro-muscular) or by the type of implant. In cases involving management of mammary asymmetry justifying surgical intervention on