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Body mass index can predict outcomes in DTI prepectoral breast reconstruction.

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Sir,

We read with great interest your article discussing the effect of Body Mass Index (BMI) on outcomes after prepectoral breast reconstruction (PBR)[1](Effect of Body Mass Index on Outcomes after Prepectoral Breast Reconstruction). We hope this retrospective report could be the starting point for a well-designed multicentric trial with long follow-up.

The authors retrospectively studied 197 patients, undergoing PBR with a two-stage expander/implant procedure. The patients were stratified into BMI groups and BMI was assessed as an independent predictor of complications. The authors concluded that BMI, as a continuous variable, did not independently predict any complication. Conversely, diabetes and smoking emerged as significant predictors of any complication.

We recently conducted a retrospective comparative analysis of risk factors and outcomes between patients undergoing direct to-implant (DTI) and patients undergoing two-stage expander-assisted (TSE) PBR[2]. We investigated the association between the incidence of surgical and aesthetic complications and several variables in 397 patients. In the TSE group, we found no significant association between complications rate and the variables considered in the analysis[3]. In the DTI group, a multiple regression model found a significant association between surgical complications and BMI and adjuvant radiotherapy[2,4,5]. The association remained significant only for BMI, when investigated for the onset of aesthetic complications. Applying a threshold of BMI<22, values under this point were associated with an increased risk of developing both aesthetic and surgical complication in the DTI group but not in the TSE group[2].

Following these results, we agree with the authors that BMI is not a predictor of outcomes in two-stage expander-assisted PBR[1]. Nevertheless, we believe that extending this consideration also to DTI could be a remarkable bias. A two-stage approach in patients at lowest BMI with thin mastectomy flaps allows for progressive creation of a suitable pocket to fit the definitive implant[2]. In DTI PBR, the burden of the implant on the thin mastectomy flaps can increase the stress and tension, while impairing the vascular supply[2].

In our series, patients at lowest BMI were found more prone to develop a complication, if they had a DTI reconstruction. Thus, we believe that BMI and adjuvant radiotherapy could be examined as potential parameters for the selection of candidates to PBR. At lower levels of BMI and whenever postoperative radiotherapy is planned, TSE reconstruction would be considered a more reliable approach, even at the cost of a surgical procedure involving two stages. On the other hand, average BMI patients, not undergoing radiation therapy would benefit from either DTI or STE. In these cases, we prefer to apply a single-stage technique, in order to reduce patients' morbidity, while improving cost-effectiveness.

We congratulate with the authors for the tremendous amount of data put in their study. So far, no guideline has already been produced and there is no consensus about the proper indications for PBR. It is not late to look for level-one evidences to guide our future reconstructive choices and we consent that both our reports cater the aim to guide future patient selection for PBR.

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