





Mastectomy with immediate breast reconstruction during “phase 1” COVID-19 emergency: An Italian experience

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Since the beginning of the COVID 19 outbreak, a number of guidelines and recommendations have been released on how to best re-adapt clinical activities, including breast cancer care.

The American College of Surgeons' COVID 19 Pandemic Breast Cancer Consortium (which comprises the National Accreditation Program for Breast Centers, the Commission on Cancer, the American Society of Breast Surgeons, and the National Comprehensive Cancer Network) recommended to reprioritize breast cancer treatment basing on three phases of acuity of the local COVID-19 situation and of hospital capacities (“semi-urgent,” “urgent,” and “critical” settings).

With regard to patients scheduled for mastectomy, the issued recommendation was to defer breast reconstruction even in semi-urgent settings.¹

A similar recommendation to delay breast reconstruction was issued in Europe by the European Society of Medical Oncology (ESMO) and other groups.^{2,3}

But immediate breast reconstruction is considered part of the “gold standard” treatment for patients requiring mastectomy as it allows significant benefits compared to delayed reconstruction: It preserves self-esteem and normal perceptions of body image, improves feelings of femininity, charm, sexuality, and sense of self, ultimately enhancing the quality of life. Furthermore, immediate reconstruction improves body posture.⁴⁻⁶

Denying immediate breast reconstruction to all patients undergoing mastectomy without taking into account the acuity of COVID-19 settings would generate three unfavorable consequences:

- A significant backlog of patients requiring delayed reconstructive procedures, with additional challenges and costs for the health system months to follow.
- An unacceptable substandard of care, not supported by definitive clinical evidence.
- An additional psychosocial distress, in patients undergoing surgical treatment during the COVID era. These patients, as documented in a recent survey, have strained coping capacities due to the fact that the fear for their breast cancer is strongly enhanced by the fear of the virus.^{5,7,8}

These consistent concerns led our multidisciplinary team to evaluate whether or not to adopt the indication to defer immediate reconstruction in all cases. As our hospital remained in a “semi-urgent” to “urgent” setting” during the entire pandemic trajectory, the shared thinking was that by using a previously described strict COVID-19 protection protocol,⁹ we could maintain our regular volumes of surgical interventions for breast cancer and continue to offer immediate implant reconstruction to patients that asked for it even during the pandemic outbreak.

During the 3-month period (February 1–April 30, 2020), of the Italian “phase 1” COVID-19 pandemic, 326 patients with

histologically proven invasive breast cancer received surgical treatment in our breast unit. Among them, 50 patients (15.3%) were scheduled for mastectomy (Group A). Every woman in this group was informed of risks and benefits of immediate reconstruction, and as a result of a shared decision-making process, all patients opted to receive it, confirming the extraordinary importance that patients attribute to this procedure.

During the same trimester of the previous year (February 1–April 30, 2019), surgical treatment was performed in 341 patients with histologically proven invasive breast cancer. Among them, 43 (12.6%) received mastectomy and immediate reconstruction (Group B).

The performance of immediate breast reconstruction in patients undergoing mastectomy during the COVID pandemic did not increase postoperative complications rates (8.0% vs 13.9%) in group A and in group B, respectively, or postoperative hospitalization time (2.9 days vs 4.5 days). These results were acquired without any significant increase in exposure to COVID-19 infection (Table 1).

Two asymptomatic patients resulted positive at the SARS-COV2 quick test at the time of hospital check-in. They were immediately confined in a specific unit and repeated two nasopharyngeal swabs at 48-hour interval. Both swabs resulted negative for SARS-COV2, confirming a false positivity of quick testing, so the patients received scheduled surgical treatment while remaining in the confinement unit.

We did not observe any case of symptomatic COVID-19 infections during hospitalization or after discharge, with a mean follow-up of 110 days.

These preliminary results seem to indicate that with the use of a proper COVID-19 protection protocol, immediate breast reconstruction can safely be offered at least in semi-urgent settings.

We clearly understand the limits of our study: It is a retrospective review of a single-center experience with a small number of patients and a short follow-up.

Despite these mentioned limitations, we hope that our results can encourage breast units to adjust their treatment policies in patients scheduled for mastectomy taking into account a focused analysis of local COVID-19 diffusion and single institution capacities rather than adopt of “one-size-fits-all” recommendations.

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TABLE 1 Surgical aspects

| Characteristic | 2020 | 2019 |
|--------------------------------------|--------------------|--------------------|
| | Group A (50) | Group B (43) |
| Type of mastectomy | | |
| Nipple-sparing mastectomy | 39 (78%) | 38 (88.4%) |
| Skin-sparing mastectomy | 11 (22%) | 5 (11.6%) |
| Side of mastectomy | | |
| Unilateral | 36 (72%) | 25 (58.1%) |
| Bilateral | 14 (28%) | 18 (41.9%) |
| Type of reconstruction | | |
| Tissue expander | 11 (22%) | 9 (20.9%) |
| Definitive prosthetic reconstruction | 39 (78%) | 34 (79.1%) |
| Contralateral symmetrization | 0 | 15 (34.9%) |
| Implant reconstruction | | |
| Prepectoral | 28 (56%) | 25 (58.2%) |
| Subpectoral prosthetic | 11 (22%) | 9 (20.9%) |
| Subpectoral tissue expander | 11 (22%) | 9 (20.9%) |
| Surgical timing (minutes) | 258 (260; 126-515) | 310 (312; 195-480) |
| Postoperative hospitalization (days) | 2.9 (3; 2-4) | 4.5 (4; 3-7) |
| Number of outpatient visits | 2.09 (2; 2-3) | 6.2 (6; 6-10) |
| Postoperative complications | | |
| Seroma | 3 (6%) | 5 (11.6%) |
| Wound dehiscence | 1 (2%) | 0 |
| CAC necrosis | 0 | 1 (2.3%) |

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