Eur J Plast Surg
DOI 10.1007/s00238-016-1263-x

ORIGINAL PAPER

Effect of neoadjuvant chemotherapy on women undergoing breast cancer surgery and immediate breast reconstruction with latissimus dorsi flap and silicone implants

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Received: 15 September 2016 / Accepted: 28 November 2016

Abstract The use of the latissimus dorsi flap in immediate breast reconstruction is a relatively simple procedure using a flap with a very reliable and consistent vascularity. Neoadjuvant chemotherapy improves local surgical conditions; however, most chemotherapeutic agents are cytotoxic and may increase the risk of postoperative complications. This study evaluated the effects of neoadjuvant chemotherapy on women with cancer who underwent immediate breast reconstruction with latissimus dorsi flap and silicone implants. Data were collected from medical records of 102 patients with cancer who had undergone immediate breast reconstruction with latissimus dorsi flap and silicone implants from August 2010 to December 2014. Thirty-three patients received neoadjuvant chemotherapy (study group) and 69 patients underwent primary surgical treatment (control group). Three (2.9%) patients in the study group had a major postoperative complication (two cases of hematoma requiring surgical drainage and a case of flap necrosis), which was the only variable showing a significant difference between groups ($P = 0.032$). Neoadjuvant chemotherapy followed by cancer surgery with immediate breast reconstruction with latissimus dorsi flap and silicone implants was not associated with an increased risk of postoperative surgical and clinical minor complications. It was associated with a significant increase in postoperative major complications, despite the small number of cases. However, patients who received neoadjuvant chemotherapy had a significantly more aggressive disease and advanced-stage cancer, and required a more extensive cancer surgery. Level of Evidence: Level III, risk / prognostic study.

Keywords Neoadjuvant therapy · Drug therapy · Mammaplasty · Myocutaneous flap

Introduction

Breast cancer is the most common cancer among women. The Brazilian National Cancer Institute (INCA) estimated that 57,960 new cases will occur in Brazil in 2016. Statistics show an increase in the incidence of neoplasia in both developed and developing countries. In Brazil, mortality rates remain high because the disease is still diagnosed in advanced stages [1]. The surgical treatment of cancer has evolved considerably after the description of the classical radical mastectomy by Halsted in 1894 [2]. Since the 1960s and 1970s, new less aggressive surgical techniques have been developed to reduce surgical morbidity without compromising the oncological outcome [3–6]. Breast reconstruction techniques have also advanced and the use of the latissimus dorsi flap, which was first described by Tansini in 1906, has gained popularity because it is a relatively simple procedure using a flap with a very reliable and consistent vascularity [7–11]. In this context, mastectomy is still indicated for a large number of women with breast cancer, and most of them are candidates for immediate breast reconstruction.

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Published online: 26 December 2016