Management of nipple-areolar complex complications in skin-sparing mastectomy with prosthetic reconstruction
A case report

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INTRODUCTION AND OBJECTIVES: Venous congestion of the NAC (Nipple-Areola Complex) is not an uncommon complication of Skin-Reducing Mastectomy (SRM). The correct and prompt evaluation of the NAC’s vitality in the first hours after surgery is important for the survival of the same, in fact the possibility of early intervention allows avoiding the use of invasive and radicals techniques in the advantage of simpler rapid procedures.

MATERIALS AND METHODS: DM, 57yr, multiple invasive ductal carcinoma of the right breast, underwent a SRM and immediate reconstruction with implant in August 2014. In the immediate post-operative appeared a venous stasis of the NAC. Treatment started with Negative Pressure Wound Therapy (NWPT) through VAC-Systems to 75 mmHg.

RESULTS: The use of the VAC-Therapy was in total 12 days and allowed the partial rescue of the NAC (85%). The vacuum pump is put into a portable bag so the patient’s mobility is not limited.

DISCUSSION: NWPT permitted a rapid resolution of NAC’s complication in SRM in order to guarantee an optimal timing for the start of adjuvant chemotherapy. The VAC-Therapy is a cost effective and simple to use in cases of suffering venous NAC in patients undergoing breast surgery.

KEY WORDS: NAC, NWPT, Skin-Reducing Mastectomy, VAC-Therapy

Introduction

Breast cancer is the neoplasia with the highest incidence in the female population with a huge physical and psychological impact.

Venous congestion of the NAC (Nipple-Areola Complex) is not an uncommon complication of Skin-Reducing Mastectomy (SRM) with immediate implant. This oncoplastic technique allows preserving the NAC, obtaining a good skin coverage of the implant and ensures the oncological radicality. The correct and prompt evaluation of the NAC’s vitality in the first hours after surgery is important for the survival of the same, in fact the possibility of early intervention allows avoiding the use of invasive and radicals techniques to the advantage of simpler rapid procedures.

Materials and Methods

We present the case of a patient, DM, 57, suffering from multiple invasive ductal carcinoma of the right breast, who underwent a SRM and immediate reconstruction with implant in August 2014. NAC was based on a...
supero-medial dermal flap, width 7cm. In the immediate post-operative the clinical breast examination it appeared in good condition except for a slight venous stasis of the NAC (Fig.1). Treatment was started with Negative Pressure Wound Therapy (NWPT) through VAC-Systems to 75 mmHg for a period of 7 days (Fig. 2). Following the treatment, the NAC appeared well-perfused and vital except for the superior-lateral margin of the same, which showed a residual superficial necrosis. After surgical debridement of the necrosis the NWPT was continued for further 5 days in order to promote drainage of blood-serum and to stimulate granulation from the margins of the loss of substance. The result was a dehiscence of the lateral portion of the upper margin of the areola healed by secondary intention in 11 days (Fig. 3).

Results

There are various factors that influence the vitality of the NAC after breast reconstruction such as smoking, obesity and advanced age (> 30° ys); these factors are frequent in cancer "type" patient candidate for SRM. In literature, there are studies about the variability of diagnostic imaging neurovascular anatomy of NAC and how it can be evaluated pre and intra-operatively in order to ensure its vitality after breast surgery 2. According to Irwin et al in a case series of 104 breast reconstructions using this technique, the complication rate to NAC is around 9.6% and it is the highest rate of complication of their series 3. These minor complications may lead to a delay in the start of the healing surgical and adjuvant chemotherapy and/or radiotherapy, compromising the survival rate of these patients. A quick resolution and easy execution of the complications is a top priority for the health of these patients.

In the literature, various techniques are described to reduce venous congestion of the NAC after breast reconstruction but few reports describe the use of the VAC-Therapy. NPWT has amply demonstrated to reduce significantly perilesional tissue edema in different wound types 4-5, including after breast reconstruction 6-7. Dian et al reported, in a paper on the treatment of difficult wounds of the breast, that the total costs of NPWT were approximately EUR 210.28 / week 8. Although the daily costs are higher, the shorter duration of therapy with improved patient convenience, in addition to its documented faster healing rates when compared to traditional dressing changes make this approach attractive.
and its use economically efficient. The use of the VAC-Therapy was in total of 12 days and allowed the partial rescue of the NAC 85%. The vacuum pump can be put into a portable bag so that the patient's mobility is not limited. Indeed the VAC system we used is contained in a portable bag, enables the not limited mobility of the patient, and therefore increasing the compliance to treatment.

There are data on the quality of life of patients under VAC-therapy versus the conventional therapy for the treatment of open wounds. They show an improvement of the quality of life.

Discussions

NPWT, which has found wide use in this years in Plastic Surgery, in our experience has proved to be effective in successfully resolve a case of suffering of NAC in patients undergoing SRM with prosthetic reconstruction. This treatment had permitted a rapid resolution of the complication in order to guarantee an optimal timing for the start of adjuvant chemotherapy.

The VAC-Therapy is a cost effective and simple to use in cases of suffering venous NAC in patients undergoing oncoplastic techniques.

References