Augmentation mammoplasty after conservative breast surgery

Essay

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ALND	Axillary lymph node dissection
ACC	Adverse capsular contracture
NAC	Nipple areola complex
BCS	Breast-conserving surgery
BCT	Breast conserving therapy
BRCA1	Breast cancer type 1
BRCA2	Breast cancer type 2
C TRAM	Conventional trasverse rectus abdominis musculocutaneous
DIEP	Deep inferior epigastric perforator flap
DBR	Delayed breast reconstruction
DCIS	Ductal carcinoma in situ
ELD	Extended latissimus dorsi flap
FNA	Fine needle aspiration
IBR	Immediate breast reconstruction
IMF	The inframammary fold
LD	Latissimus dorsi muscle
MRM	Modified radical mastectomy
PST	Preoperative systemic therapy
SGA	Superior gluteal artery free flap
SGAP	Superior gluteal artery perforator flap
SLNB	Sentinel lymph node biopsy
SSM	Skin-sparing mastectomy
TRAM	Trasverse rectus abdominis musculocutaneous flap
WHO	World health organization

Introduction

Breasts are regarded as a major symbol of femininity, and the loss of a breast can have important psychological consequences. For most women, mastectomy is a mutilating and deforming operation that has the capacity to severely damage a woman's self-image. ***(Stephen S. Kroll, 2000)***

Breast cancer is a threatening disease and a socio-culturally formed stigma. Women who develop tumors in their breast tissue feel marked and emotionally alien to themselves. Immediate and secondary breast reconstruction helps patients to reconfigure the integrity of the bodyself. ***(C. Lammer et al., 2007)***

Breast cancer is the most common cancer among women in Arab countries. Breast cancer constitutes 13-35% of all female cancers. Almost half of patients are below 50 and median age is 49-

52 years as compared to 63 in industrialized nations. An advanced disease remains very common in Egypt. Mastectomy is still performed in more than 80% of women with breast cancer**.** ***(N.S. El Saghir et al., 2007)***

The goals of modern breast cancer surgery include the cure of the patient, preserving the breast as much as possible and satisfying the woman by giving her physical and psychological welfare***. (A. Vallejo da Silva et al., 2007)***

Surgical treatment for breast cancer has undergone major changes over the last 30 years; there has been a major shift from radical surgery to breast-conserving surgery, with no harmful effects on survival. Some women will not be suitable for breast-conserving surgery and mastectomy is indicated; for these women, there has been an improvement in the techniques of breast reconstruction***. (S. Shokuhi et al., 2007).***

Patients today are not only demanding effective surgical treatments, but good cosmetic

results as well. Thus, perhaps more than any other field, breast surgery has evolved into both a surgical science and an art***. (Ismail Jatoi et al., 2006)***

Breast cancer should be treated in the framework of a multidisciplinary team, including the radiologist, the general surgeon, the medical oncologist, the radiotherapist, the pathologist, the psychologist and the nurses. The plastic surgeon has become part of the team and his role is to improve the quality of the life of the patients, reducing the psychological impact of the mutilation and improving the functional and cosmetic results. ***(J.-Y.Petit et al., 2001).***

Breast reconstruction is considered as a vital part of the total breast cancer management. The number of techniques available today allows reconstructing the breast whatever the local anatomical conditions. The patients may expect to get a good cosmetic result at least in what concerns the shape of the reconstructed breast and the

symmetry with the contralateral one. This will be a great psychological support although we know that the breast reconstruction can never match perfectly with the native breast and that the psychological process, which allows the woman to overcome the distress due to the mutilation is much more complex. ***(J.-Y. Petit et al., 2001).***

Breast reconstruction can be done safely and effectively either at the time of tumour ablative surgery or as a delayed procedure. Irrespective of the timing of reconstruction, a spectrum of techniques is available from which the patient and surgeon can choose. These techniques can involve breast implants, autologous tissue, or both. ***(S Ahmed et al., 2005).***

Aim of the work

The aim of this essay is to present the different trends in Breast reconstruction techniques and surgical management of Breast cancer to improve the quality of life of the breast cancer patient.

Surgical anatomy of the breast

The breast occupies an important place in the image of women in our culture, and in its beauty rests a fundamental element of femininity. This beauty is, however, both subjective

and determined b an anatomy and physiology . **(A. Fitoussi et al 2009**)

Development of the beast

The human breast reaches its full functional capacity during lactation with the production of breast milk. The human breast is a dynamic organ that does not go through all developmental stages unless a woman experiences pregnancy and childbirth. The course of breast development can be described in distinct phases beginning with the fetal phase and progressing through the neonatal/prepubertal and postpubertal phases. **(*Donna T*. 2007)**

Fetal development:

The human breast develops from a thickened ectodermal ridge (milk line) situated longitudinally along the anterior body wall from the groin to the axilla at about 6 weeks' gestation. Regression of the ridge occurs except for the pectoral region (2nd– 6th rib), which forms the mammary gland. Supernumerary glands may develop anywhere along the ectodermal ridges .The adipose tissue of the mammary gland develops from connective tissue that has lost its capacity to form fibres , and it is considered necessary to further growth of the parenchyma**.(Bannister LH 1995)**

Neonatal and Prepubertal Development

The ducts in the newborn breast are rudimentary and have small, club-like ends that regress soon after birth. Before puberty, the growth of the breast is isometric. Allometric growth of both the stroma and epithelium begins with the onset of puberty (8–12 years of age). **(Sejrsen K 1997)**

At puberty, the increase in breast size is mainly caused by the increased deposition of adipose tissue within the gland. However, progressive elongation and branching of the ducts creates a more extensive ductal network.10 The major site of growth is the bud-like structures at the end of the ducts, and these form the terminal duct lobular units or acini **. (Sternlicht MD et al 2006)**

During pregnancy secreting alveoli appear. During the early weeks, ductal sprouting and lobular proliferation occur, with increased nipple and areolar pigmentation. The alveoli now display a lumen surrounded by the secretory cells. In the last days of pregnancy, the breasts secrete colostrums , a yellow, sticky, serous fluid, which is then replaced by true secretion of milk. When lactation ceases, the glandular tissue returns to its resting state. **(Harold Ellis 2006)**