

INTRODUCTION

The female breast has always been regarded as a symbol of femininity. The breast is extremely important in a woman's life, forming an integral part of her physical and psychological sense. (*Gabka et al, 2009*).

Breast cancer is the most common malignancy seen in women. Advances in breast health awareness, with improved screening, earlier detection of disease, and more effective systemic therapy, have resulted in decline in breast cancer mortality rates, by 2% per year. (*Choi et al, 2006*).

Breast reconstruction options should be available to the patient when a mastectomy approach is recommended. Depending on the experience of the surgical oncologist. A close working relationship between the surgical oncologist and a reconstructive surgeon is important for optimum management of the patient. (*Greenlee et al, 2001*)

Breast reconstruction is becoming increasingly important due to changes in patient expectations and demand. The aim of reconstruction is to restore the dimension, position, contour and symmetry of the breast following extirpation of the cancer. The reconstruction may be achieved by immediate or delayed techniques with adjustment of the contra lateral breast to achieve symmetry. (*Morrow et al., 2001*).

Immediate reconstruction can safely be performed even in the presence of locally advanced breast cancer. The local and distant relapse rates were similar for patients with locally advanced breast cancer undergoing modified radical mastectomy with or without immediate breast reconstruction. Delayed reconstruction is preferable for some patients.

Those who are overwhelmed by the diagnosis of breast cancer and the discussion of surgical and medical approaches to treatment may not be able to make a decision regarding their preferences for breast reconstruction at the time of the mastectomy. For such patients, a step-by-step approach that addresses tumor management first and the reconstructive procedures later may be more appropriate. Delayed reconstruction may also be preferable in patients with extensive tumor involvement of the breast and in those with inflammatory carcinoma and/or extensive lymph node involvement who will likely undergo extensive postoperative chemotherapy and radiation. (*Newman et al,1999*).

Breast reconstructions require more than one operation, and the process may extend over many months. Breast reconstruction using an implant is the simplest technique begins with the placement of a tissue expander beneath the pectoralis muscle and laterally beneath the anterior aspect of the serratus anterior muscle then the tissue expander is removed followed by placement of permanent synthetic implant filled with either saline or silicone gel which provides a softer breast form .

(*Cunningham et al ,2000*).

A practical approach to the use of the patient's own tissues for breast reconstruction began in 1977 with the reintroduction of the latissimus dorsi flap. (*Hartrampf et al,1982*).

The latissimus dorsi myocutaneous flap was the method of choice for autologous tissue breast reconstruction until the introduction of the transverse rectus abdominis musculocutaneous (TRAM) flap in 1982. (*Hartrampf et al,1982*).

The latissimus dorsi muscle , with overlying skin ellipse can be transferred from the back to the breast area. An implant placed beneath the

flap is usually necessary to provide adequate bulk for the breast reconstruction with placement of a tissue expander implant beneath the latissimus dorsi flap when the flap is constructed. (*Bostwick et al,1990*).

The advantage of the TRAM flap procedure is the provision of adequate soft-tissue bulk to provide a breast reconstruction without the use of implants. The TRAM flap consists of a skin ellipse and the underlying subcutaneous tissue from the mid abdomen pedicled on one or both of the vertical abdominal rectus muscles. The principal blood supply of the pedicled flap is the superior epigastric artery, a terminal branch of the internal mammary artery. (*Nieminen et al,1999*).

The microvascular free TRAM flap approach has been extended by the development of the deep inferior epigastric perforator (DIEP) flap in which the skin and subcutaneous tissue island are transferred based only on the perforating branches of the deep inferior epigastric vessels. (*Futter et al ,2000*)

When performing breast reconstruction, plastic surgeons should recognize that each case begins as reconstructive but ends as aesthetic. When an additional factor such as radiation therapy is added to the equation, suboptimal aesthetic results need to be minimized. (*Tran et al,2000*).

Skin sparing mastectomy was first described by Toth and Lappert in 1991 and is being increasingly adopted for patients with early breast cancer. (*Sachini et al, 2006*).

Skin-sparing mastectomy is a procedure which is intermediate in radicality between conventional breast conservation therapy and modified radical mastectomy. (*Sachini et al, 2006*).

Skin-sparing mastectomy (SSM) is a well-established technique for Immediate breast reconstruction (IBR) (*Audretsh, 2008*).

Nipple areola reconstruction begins 3 months after placing the permanent implant. The nipple is constructed using a Bowtie-type flap procedure of the breast skin. Three months later, the areola is created using a tattoo technique. (*Janowsky et al ,2000*).

The aesthetic results from autologous reconstruction are superior to those of implant based reconstruction due to their versatility, their more natural appearance, consistency and durability. Autologous tissue can better withstand radiotherapy. the reconstruction of the nipple-areola complex represents the final step in breast reconstruction in women who underwent radical mastectomy after breast cancer (*Valdatta, 2008*).

The timing of surgical treatment, chemotherapy and radiotherapy is very important according to the principle of multidisciplinary, a close cooperation between the reconstructive surgeon, the oncologic surgeon, the oncologist and the radiotherapist is necessary (*Toledano et al,2007*).