

group was represented by 96 healthy women (aged 32–64 average 49.3). The body posture was analysed by a computer using three-dimensional photometry (CQ Electronics System) consisting in three-dimensional reproduction of shapes and positions based on the photos of examined surface. The examination was conducted in Photogrammetry Studio of Rehabilitation Centre "Akwawit" in Leszno in similar, repetitive conditions, five times every six months. The statistical analysis was carried out with the use of Mann-Whitney's and Friedman's nonparametric tests.

Results: The comparative analysis of variables defining body posture in frontal and sagittal plane showed essential difference between measurements in group of women after mastectomy in comparison with group of healthy women. A greater intensification of changes in position of symmetrical osseous points (shoulder-blades, shoulders, pelvis) was noted in a group of women after mastectomy.

Table 1. A comparison of women after mastectomy and healthy women

Item	Abbr.	p value
1. Difference in distances of lower angles of shoulder-blades from spinal column	OL	0.04
2. Difference in height of lower angles of shoulder blades (inclination)	UL	0.01
3. Inclination of shoulder line to the level	KLB	0.04
4. Difference in height of shoulder position	LBW	0.02
5. Difference in height of waist triangle	TT	0.01
6. Max. deviation in the spinous processes from the vertical position	UK	0.01
No essential differences in both examined groups of women in the range of:		
1. Trunk inclination	KNT	0.1
2. Pelvis inclination	KNM	0.46

Conclusions:

1. The photogrammetry estimation of the body posture shows essential disorders at women after mastectomy in comparison with a group of healthy women.
2. The noninvasive photogrammetry method of body posture analysis is useful in the estimation of the quality of the postsurgical rehabilitation.

387

POSTER

Questionable successful pregnancy after chemotherapy and TRAM flap surgery? Case Report

J. Jankau, J. Jaskiewicz. *Medical University of Gdansk, Poland, Plastic Surgery and Burns, Gdansk, Poland*

The authors would like to present a case of a 30 year old woman with family history of breast cancer who were diagnosed in the age of 27, pending annual medical check-up, with breast cancer (USG guided punch biopsy – cellular carcinomatosis). Before the surgical removal of the cancer patient went two courses of chemotherapy (CMF Bonadonna trial – 5FU 1000 mg, MTX 70 mg). After this two courses of chemotherapy patient underwent mastectomy (Ca mammae dx ductale invasivum/T2N1aMx, no axillary's lymph nodes involved) with simultaneous ipsi-lateral-TRAM flap reconstruction. In the post op follow-up patient did not present any complication due to surgery and no hernia were present. After the reconstruction patient underwent additional four courses of chemotherapy (CMF Bonadonna trial – 5FU 1000 mg, MTX 70 mg). At that time the council advise her not to get pregnant, despite this warning after eight month patient made her own decision to be pregnant and she did. The council with oncologists, gynecologists and breast surgeons decide that in that case there is no reason to terminate as long as patient is self-conscious of possible complications. In 32nd week of pregnancy patient underwent caesarean section and deliver baby-girl with Down Syndrome with no additional abnormalities. The post-op period was without any complication like abdominal wall laxity and abdominal hernia or any infections; no abdominal revisions were required after delivery. In two years of follow-up due to controls mother and child has no major complications, abdominal contour is acceptable and there are no signs of cancerous disease in both mother and child.

The author would like to arise a question whether it was a successful pregnancy?, no complication before and after surgery, and what should council advice to a woman who had a history of breast cancer and underwent TRAM flap reconstruction with pre and post chemotherapy whether to have or not to have a child? Upon the presented case and literature we can state that TRAM flap reconstruction (if properly executed) is not a contraindication to pregnancy, rather chemo or radiotherapy may be.

388

POSTER

Arm lymphedema reduction in breast reconstruction with transverse abdominal island (TRAM) flaps

P. Rak¹, J. Jaskiewicz², W. Radilovitch³, I. Grobelny⁴. ¹Medical University of Gdansk, Department of Plastic Surgery and Burns, Gdansk, Poland; ²Grodno City Emergency Hospital, Grodno, Belarus; ³Department of Reconstructive Microsurgery, Grodno, Belarus

Background: Tissue expander/implant breast reconstruction in patients after radical mastectomy and adjuvant radiotherapy is relatively contraindicated in cases of lymphedema of the arm. In such a clinical situation the use of autogenous tissue for breast reconstruction may have more advantages.

The aim of the study is determine why an autogenous well vascularised TRAM flap used for breast reconstruction may reduce symptoms of lymphedema.

The authors present material of 15 non-consecutive pts from three different dept. (Gdańsk, Warszawa, Grodno) with breast reconstruction with free and pedicle TRAM flaps where the tendency to reduce lymphedema of the upper extremity lymphatic edema as well as improvement in movements in the shoulder joint at the operated side were observed. Check measurements of swollen upper extremities were carried out in the pre-, early and late postoperative periods. The observation period is 3 years. The mentioned positive effects after autogenic tissues breast reconstruction is sustained successfully by wearing elastic compressive garment and physiotherapy exercises. Late results of the operation demonstrate a long term reduction in an upper extremity lymphatic edema. The authors presents possible explanations of this results on the basis of understanding of the lymphoedemas pathophysiology and classification. Thus, in the basis of presence of an upper extremity lymphatic edema of post-mastectomy genesis, breast reconstruction with vascularized flaps is the method of choice because of a high level of rehabilitation and improvement in quality of patients life. Postmastectomy pts who are obese, have had previous chest wall radiation and slight symptoms of lymphedema, are not good candidates for tissue expander reconstruction. The reconstruction with autogenous tissue has a number of distinct advantages.

Friday, 19 March 2004

16:00–17:15

PROFFERED PAPERS

Pathology/Predictive and prognostic factors

389

ORAL

DNA damage control genes that predispose for radiation-induced breast cancer

A. Broeks¹, G. van Haalem¹, A. Huseinovic¹, B. Nota¹, A. Nooljen², J.G.M. Klijn³, N.S. Russell⁴, F.E. van Leeuwen², L.J. van 't Veer^{1,5}. ¹The Netherlands Cancer Institute/AvL, Experimental Therapy, Amsterdam, The Netherlands; ²The Netherlands Cancer Institute/AvL, Epidemiology, Amsterdam, The Netherlands; ³Dr. Daniel den Hoed Cancer Center, Medical Oncology, Rotterdam, The Netherlands; ⁴The Netherlands Cancer Institute/AvL, Radiotherapy, Amsterdam, The Netherlands; ⁵The Netherlands Cancer Institute/AvL, Pathology, Amsterdam, The Netherlands

Background: The most important risk factor for breast cancer development is a family history of the disease. Genes implicated in family history of breast cancer include the high penetrance genes BRCA1 and BRCA2. 5–10% of all breast cancer can be explained by germline mutations in these high-risk genes. A larger part, ~10–30%, might be explained by mutations in low penetrance genes, for which candidates are ATM and CHEK2. The contribution of these genes might be explained by the role they play in the DNA damage control pathway. Radiation has been shown to be a strong risk factor for breast cancer and thus genetically predisposed individuals, especially women with inherited mutations in genes involved in DNA-damage repair and cell cycle control, may have an increased sensitivity to environmental exposures such as radiation. To evaluate the significance of germline mutations in ATM, CHEK-2 and BRCA1/2 to the risk of (radiation-induced) contralateral breast cancer (clbc), we assessed its mutation frequency in women who developed a clbc, with and without radiation treatment (RT) for the first breast tumor.

Methods: Clbc patients will be included if their first bc is diagnosed before age 50, and the interval between 1st and 2nd bc is at least 1 year. So far we collected 169 patients who did and 64 who did not receive RT for their primary bc. For each patient we obtained the full medical records for data collection. DNA was isolated from peripheral blood or paraffin tissue and currently screened for all ATM germline mutations, for one particular