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BRACHYTHERAPY FOR BREAST CANCER

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In 1987-1995 a total of 347 patients with breast cancer underwent radiosurgery treatment. Two methods of treatment were applied.

1. In cases when the tumour was localized in the medial quadrant of breast, radiosurgery was applied to the parasternal lymph nodes. During mastectomy catheters were placed in a. thoracica interna of the corresponding side. On the first or second postoperative day flexible radioactive sources were inserted into catheters. Their active length was 10-12 cm. 2. When patient refused surgery, external radiotherapy was given followed by radiosurgery. Needle sources were applied for treatment. The application of special template devices made it possible to implant radioactive sources in a strictly pre-set geometry.

Results: There was minimum radiation effect on the adjusting organs and tissues. Local recurrence of tumour in the region of irradiation was in 6 patients.

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IS AGE A MAJOR FACTOR IN BREAST CANCER PATIENTS MANAGEMENT?

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Over 65 years half of new cancers will occur. Nevertheless the elderly are poorly treated and excluded from clinical trials.

Objective. To compare prospectively 420 breast cancer patients (pts) under and over of 65 years. The end-point is the comparison of diagnosis and therapy procedures cost-effectiveness in both groups.

Patients and Methods. Up to now 100 breast cancer pts have been enrolled on this ongoing trial. Pts pathological, clinical, psychological and first treatment characteristics have been recorded and initially compared.

Results. Mean age of pts was 61 years (range 34-89, 54 pts younger than 65 and 46 older). The analysis of this set of pts did not show statistically significant differences according to their histological grade, stage at diagnosis and hormonal receptors. Eighty pts underwent modified radical mastectomy. Although their mean age (60.2 vs 55.8) was higher than the age of the 20 pts (12 younger than 65, 8 older) who underwent conservative surgery, these differences were not significant.

Older patients were significantly less informed about their true diagnosis ($p<0.001$), had less frequency ($p<0.001$) and satisfaction ($p<0.001$) of sexual intercourse. No differences were found by age in Hospital Anxiety and Depression (HAD) scale punctuation.

Conclusions. This is an interim report of an ongoing prospective trial on 420 breast cancer pts set up to know the pathological, clinical psychological and cost-effectiveness profiles of the elderly pts through the comparison with the same issues on younger pts. Some psychological data excepted there are not until now statistically significant differences between both groups.

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CONSERVATIVE TREATMENT OF EARLY BREAST CANCER

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The combined method of conservative surgery was used in our department in 1984-1992 (302 women with T1-2, N0-1, M0 stages). Conservative management consisted of quadrantectomy, or lumpectomy and total axillary dissection plus external beam radiotherapy or iridium implants.

There were two groups of patients with these combinations: the patients of the first group got radiotherapy on the second day after the operation. We boosted a tumor area by an interstitial implants (15-30 Gr). 5-year survival rate was T1N0-98%, T1N1-95%, T2N0-83%, T2N1-70%.

The patients of the second group after the conserving surgery got external beam irradiation (50-55Gr) in postoperative period to the whole breast area. The 5th and 10th-year survival rates were: T1N0-82%, T1N1- 72%, and T2N1- 5-year survival-72%.

For comparison there was one more group (III-d) of patients with surgical treatment only: 5-year survival rate was 94% for stage T1N0, 84% for T2N0, 10-year survival rate was 88% and 68%.

The local recurrence rates were in the I-st group - 7,1%, in the II-d group- 3,3%, and of the III-d group- 21,3%. Patients by themselves evaluated cosmetic results as good in the most of cases.

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MAGNETIC RESONANCE IMAGING GUIDED MINIMALLY INVASIVE TREATMENT OF BREAST CANCER.H Mumtaz, MW Kissin, MA Hall-Craggs, T Davidson, I Taylor, SG Bown
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Interstitial laser photocoagulation (ILP) is a recently developed, minimally invasive technique of local tumour destruction within solid organs. Its current limitation is the lack of an optimal imaging technique to demonstrate treatment effects. This study was designed to assess the role of breast MR (magnetic resonance) imaging in the guidance of ILP for the minimally invasive treatment of primary breast cancer.

Thirty patients with symptomatic breast cancer diagnosed by cytology underwent ILP using a single fibre (n=20) and four fibres (n=10) prior to surgical excision. MR imaging was performed using a contrast enhanced T1W 3D FLASH sequence before and after laser treatment. Real time MR imaging of laser treatment was performed in 7 patients. Following resection the extent of disease, size of laser burn and the extent of residual tumour were correlated with the MR images.

Per-procedural and delayed MR images accurately showed the extent of laser induced necrosis and residual viable tumour. The correlation coefficient (MR v Histopathological analysis) for the laser burn diameter and residual tumour was 0.90 and 0.89 respectively.

In conclusion, post-contrast MR images can accurately define the extent of both laser induced necrosis and residual viable tumour following ILP treatment of breast cancer.

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THE IMPACT OF DIAGNOSIS AND TREATMENT ON THE QUALITY OF LIFE (QOL) IN BREAST CANCER PATIENTS

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The diagnosis and management of cancer can have a major impact on every aspect of a patient's QOL. Sixteen women with breast cancer (before and 2-4 months after adjuvant chemotherapy) and 15 healthy women controls underwent a 42-item QOL questionnaire in eight dimensions which assessed general well-being, physical symptoms and activity, sleep dysfunctions, appetite, sexual dysfunction, cognitive functions, medical interaction, social participation and work performance. The subjects were asked to choose only one of five predefined constant options, which were scored from one to five in a Likert scale with multiple options, and total QOL scores were obtained. Although the total QOL score was not statistically different between the groups ($p>0.05$), general well-being, physical symptoms and activity, and sleep dysfunction showed significant regression in breast cancer patients compared to the controls ($p<0.05$).

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AMINOACYLATION OF MITOCHONDRIAL tRNA FROM BREAST CANCER TISSUE

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The mitochondria were prepared from tissue of breast cancer and non-neoplastic tissue of breast. The preparations tRNA from these mitochondria were obtained and quantity of ten radioactive amino acids bound was investigated. More tRNA were obtained from neoplastic tissue /in relation to mass tissue/. The quantity of radioactive amino acids bound to the mitochondrial tRNA was higher in vitro in breast cancer than in control tissue.