

for salivary glands increased to 18 month and next diminished to 60 months. For spinal cord there was observed significant progression of intensity late toxicity (mild functional) during second year after irradiation.

Conclusions:

1. SOMA-LENT scale seems to be adequate in the clinical practice for the estimation of late radiation toxicity of H&N region tissues.
2. Ongoing study has preliminary nature and is being continued.

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**PULSED DOSE RATE
BRACHYTHERAPY – DESCRIBING
OF A METHOD AND A REVIEW OF
CLINICAL APPLICATIONS**

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Introduction: Pulsed Dose Rate (PDR) treatment is a new brachytherapy modality that combines physical advantages of high-dose-rate (HDR) technology (isodose optimization, radiation safety) with the radiobiological advantages of low-dose-rate (LDR) brachytherapy.

Pulsed brachytherapy consists of using a stronger radiation source than for LDR brachytherapy and is giving a series of short exposures of 10 to 30 minutes in every hour to approximately the same total dose in the same overall as with the LDR. Modern afterloading equipment offers some advantages over interstitial or intracavitary insertion of separate needles, tubes, seeds or wires. Isodose volumes in tissue can be created flexibly by a combination of careful placement of the catheter and adjustment of the dwell times of the computerized stepping source. Automatic removal of the radiation sources into a shielded safe eliminates radiation exposures to staff and visitors. Radiation exposure is also eliminated to the staff who formerly loaded and unloaded a multiplicity of radioactive sources into the catheters, ovoids, tubes etc.

Material and methods: This retrospective study based on summarized clinical investigations analyses the feasibility, differences between methods of brachytherapy and preliminary oncologic results of PDR brachytherapy.

Since July 2000 15 patients were treated in Greatpoland Cancer Center using PDR brachytherapy. They were 10 patients with recurrent brain malignant glioma, 2 with recurrent nasopharyngeal cancer, and patients with lip cancer, recurrent breast cancer and recurrent salivary gland cancer. Only patient with lip cancer was treated radically. Nucletron PDR unit with 1 Ci source and PLATO planning system were used.

Results: Short time of observation doesn't allow to draw a radical conclusions. On the ground of literature and preliminary own results it seems that PDR brachytherapy is save and efficient method of treatment. The most important complication was a local infection in place of implanted catheter. In some cases (for example in patients with recurrent malignant glioma after teletherapy) PDR brachytherapy perhaps could be a treatment of choice.

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**COMPARISON OF TWO ACCELERATED
RADIOTHERAPY REGIMENS
IN MANAGEMENT OF LOCALLY
ADVANCED NON-SMALL CELL LUNG
CANCER (NSCLC) – HYPER-
FRACTIONATED CONVENTIONAL
ACCELERATED RADIOTHERAPY
(RAHIP) AND ACCELERATED
CONFORMAL RADIOTHERAPY WITH
CONCURRENT BOOST (RT-BOOST)**

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Background: Repopulation during radiation therapy may compromise the results of the treatment of NSCLC. In spite of the data showing an improvement of therapeutic ratio with shortening of the total treatment time, there is no univocal way of doing it. Current study was conducted to compare two different regimens of accelerated radiotherapy.

Material/Methods: From March 1999 to November 2000 forty patients with stage III NSCLC were included. Twenty-eight pts. (70%) received 3-4 cycles of induction chemotherapy (cis-platinum, vepeside). Twenty-six p. were treated according to RAHIP schema, 14 pts. according to RT-BOOST schedule. RAHIP