

proportional hazard model the results were as follows: Hb-level and bladder capacity before radiotherapy significantly influenced local control and overall survival, total radiation dose was of borderline significance for overall survival ($p=0.065$) but overall treatment time was not significant parameter.

Conclusions: Our study suggest that, higher total radiation dose may be related to better treatment outcome. The effect of overall treatment time is difficult to define, because its role depends on influence of other prognostic factors. The most important factors for treatment outcome are: hemoglobin level, bladder capacity before radiotherapy and T-stage.

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1H-MR SPECTROSCOPY OF NORMAL BRAIN TISSUE BEFORE AND AFTER POSTOPERATIVE RADIOTHERAPY FOR PRIMARY BRAIN TUMORS

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Purpose: The aim of the study was to reveal the impact of postoperative radiotherapy (pRT) on normal brain tissue metabolism and find out, if proton magnetic resonance spectroscopy (1H-MRS) can help in delineating tumor recurrence area.

Methods and Material: Spectra of 43 patients treated with pRT for glial tumors assessed by 1H-MRS were analyzed. Patients were treated with conformal 3D techniques using 6-20 MV photons to the total dose of 60 Gy given in 30 fractions. Control group consisted of spectra registered for 30 healthy volunteers. Spectra were taken from tumor bed and from control region before pRT and from a 3 uninvolved regions 9-12 months after the end of pRT. Voxels were located in the region of low, medium and high total dose. Relative intensities of the signals due to N-acetyl aspartate (NAA), choline based compounds (Cho), mio-Inositol (ml), lactate (Lac) and lipids (Lip) were obtained. The statistical difference be-

tween means was calculated using Mann-Whitney U-test for independent samples or paired Wilcoxon test for the different dose levels for one patient.

Results: Spectra taken after pRT were significantly different from those obtained from healthy volunteers and those acquired before radiotherapy. The lactate and lipids signals were strong and not correlated with absorbed dose. NAA/Cr ratios were significantly lower than before pRT even for the low dose regions. These differences were increasing with radiation dose. Cho/Cr and Cho/NAA ratios increased significantly in medium and high dose area.

Conclusion: 1H-MRS can not help in delineating tumor recurrence area after pRT. Surgery and pRT cause alteration of brain metabolism even in regions far from the postoperative tumor bed that received relatively low total radiation dose.

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ROLA CZYNNIKÓW WZROSTU DZIAŁAJĄCYCH POPRZEZ RECEPTORY O WEWNĘTRZNEJ AKTYWNOŚCI KINAZY TYROZYNOWEJ W WYBRANYCH CHOROBAH ROZROSTOWYCH UKŁADU KRWIOTWÓRCZEGO

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Założenia i cel pracy: Cytokiny działające poprzez receptory komórkowe o wewnętrznej aktywności kinazy tyrozynowej (TKRs) regulują wczesne etapy hematopoezy. Wśród nich wyróżniamy: insulinę (INS), somatomedyny (IGF), ligand receptora C-KIT (KL,SCF), czynniki wzrostu fibroblastów (FGF), czynnik wzrostu hepatocytów (HGF), neutrofinę (NGF), płytkowy czynnik wzrostu (PDGF), makrofagopoetynę (CSF-1). Prawidłowe komórki hematopoetyczne syntetyzują samodzielnie czynniki wzrostu podlegając działaniu pętli autokrynych. Nie ma danych, czy wzrost komórek białacz-