

Korelasi kadar osteopontin praradiasi dengan respon radiasi pada glioma maligna di RSUPN DR Cipto Mangunkusumo = The correlation between praradiation osteopontin level with radiation response in malignant glioma at Cipto Mangunkusumo Hospital / Isnaniah

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Abstrak

[ABSTRAK

Pendahuluan: Osteopontin merupakan salah satu penanda molekuler hipoksia endogen tumor. Hipoksia adalah salah satu faktor yang menentukan agresifitas penyakit. Kadar osteopontin tinggi pada berbagai keganasan termasuk glioma maligna. Peningkatan kadar osteopontin akan menyebabkan respon terapi berkurang. Penelitian ini bertujuan untuk mengetahui korelasi antara kadar osteopontin praradiasi dengan respon radiasi pada glioma maligna.

Metode: Penelitian ini merupakan studi retrospektif kohort terhadap 15 pasien maligna glioma yang menjalani terapi radiasi dari juli 2004 sampai mei 2015 di RSUPN. DR. Cipto Mangunkusumo. Osteopontin diperiksa menggunakan metode ELISA dari sampel parafin blok. Volume tumor dihitung dari CT scan atau MRI berdasarkan pengukuran volume tiga dimensi. Respon tumor dinilai dengan membandingkan volume tumor sebelum dan sesudah radiasi dengan menggunakan CT dan MRI.

Hasil: Didapatkan rerata kadar osteopontin sebesar $0,49 \pm 0,45$ ng/ml, rerata persentase perubahan volume tumor $8,59 \pm 54,22$ %. Volume tumor yang membesar 60%. Tumor yang progresif sebesar 26,7%. Secara keseluruhan terdapat korelasi negatif lemah yang tidak bermakna ($r -0,39$ dan $p 0,146$) antara kadar osteopontin dengan respon radiasi. Terdapat korelasi positif kuat yang tidak bermakna ($r +0,68$ dan $p 0,219$) antara kadar osteopontin dengan respon radiasi pada kelompok yang menggunakan kemosenitizer temozolamide.

Kesimpulan: Terdapat korelasi negatif lemah yang tidak bermakna antara kadar osteopontin dengan respon radiasi. Terdapat korelasi positif kuat yang tidak bermakna antara kadar osteopontin dengan respon radiasi pada kelompok yang menggunakan kemosenitizer temozolamide.

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ABSTRACT

Introduction : Osteopontin is an endogenous molecular marker of tumor hypoxia, which is one of factors that determine the aggressiveness of the disease. Increased level of osteopontin will decrease therapeutic response which will eventually influence the success of therapy. The purpose of this study is to determine the correlation between osteopontin level and radiation response in malignant glioma.

Method : This is a retrospective cohort study of 15 malignant glioma patients who

underwent radiation from July 2004 to May 2015 at Cipto Mangunkusumo Hospital. Osteopontin level was measured with ELISA from paraffin embedded tissue. Tumor volume was calculated by measuring three dimensional volume of tumor imaging from CT or MRI. Tumor response was evaluated by comparing pre-irradiation with post-irradiation tumor volume seen in CT and MRI.

Result : The mean osteopontin level was 0.49 ± 0.45 ng/ml and the mean percentage of change in tumor volume was 8.59 ± 54.22 %. Enlargement of tumor volume was 60 %. Progressive disease was found in 26.7 % of patients. Overall, there was an insignificant weak negative correlation ($r -0.39$ and $p 0.146$) between level of osteopontin and radiation response. There was an insignificant strong positive correlation ($r +0.68$ and $p 0.219$) between level of osteopontin and radiation response in the group that received radiation therapy concurrent with temozolamide.

Conclusion : Overall, there was an insignificant weak negative correlation between level of osteopontin and radiation response. In the group that received radiation therapy concurrent with temozolamide, there was an insignificant strong positive correlation between level of osteopontin and radiation response, Introduction : Osteopontin is an endogenous molecular marker of tumor hypoxia,

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