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CORRELATION BETWEEN COX-2 EXPRESSION WITH HISTOPATHOLOGICAL GRADING IN ASTROCYTOMA

Abstract

Cox-2 is an isofrom of cyclooxygenase which probably has a role in the pathogenesis of intracranial astrocytoma. Although the specific mechanisms has not elucidated, cox-2 had been suggested involve in tumor angiogenesis. In many cases of human neoplasm including astrocytoma, cox-2 expression increases especially in the high proliferation cell type of tumor (malignant type) for instance GBM, despite there are no data showed the correlation between cox-2 expression and histopathological grading. The objective was to prove the correlation between cox-2 expression and histopathological grading in astrocytoma. It was analytic cross sectional study using immunohistochemistry for cox-2 in 25 cases of astrocytoma during January 2003 until March 2007. Data were analyzed by statistical methods to rule out the correlation between histopathological grading (WHO System), patient age and sex to cox-2 expression. Twenty five pathological materials, exsiced from 25 brain astrocytoma patients who underwent surgery for brain astrocytoma were evaluated. Their age range from 12 to 62 years, with the means of 33,36. The 31-45 age group was the highest (31 %). The sex ratio was 56 % men and 44 % women. Histopathological grading revealed: Diffuse astrocytoma (WHO Grade II) 40 %, Anaplastic astrocytoma (WHO Grade III) 28 %, GBM (WHO Grade IV) 24 %, and Pilocytic astrocytoma (WHO Grade I) 8 %. The highest positive cells for cox-2 were showed in GBM with the mean of 5,802 %, and the lowest were on Pilocytic astrocytoma (WHO Grade I) for 0,194 %. Spearmen correlation analysis shows positive correlation between cox-2 expression and histopathological grading in astrocytomas. There is a correlation between cox-2 expression and histopathological grading according to WHO system. There is also correlation between cox-2 expression and patient age. In addition, patient age has a positive correlations to astrocytoma histopathological grading. This study shows that the higher the cox-2 expression is the higher is the histopathological grading of astrocytoma and the older patient is the higher is histopathological grading of astrocytoma.

Keyword: astrocytoma, cox-2, expression, immunohistochemistry, histopathological, , ,

Daftar Pustaka: