

strated association with cellular proliferation in astrocytomas, however not in an exclusive way.

The cytoplasmic c-Myc protein positive index was bigger among high-grade tumors (71.43%), with maximum expression scores in Astrocytomas Grade IV (LI mean=15.57; H mean=24.42).

In general, 76.9% of the Astrocytomas Grade IV tumoral cells revealed moderate positive index for GFAP.

The positive index and expression scores for p53 and p27^{KIP1} (nuclear and cytoplasmic) proteins showed a tendency to increase with the astrocytic tumors progression, while the p21^{WAF1/CIP1} tumor suppressor detection demonstrated opposite orientation (except in grade IV).

The percentage of Bcl-2 and Bax positive tumors increased in accordance with histological grade of astrocytomas, with general positive index of 43.26% and 24.67%, respectively. Bcl-2 staining scores demonstrated propensity to addition according to tumoral evolution, while the scores for Bax was similar in all graduations.

The erbB2 protein expression was evidenced only between Astrocytomas Grade IV (positive index=14.28%), while the overexpression of EGFR protein was distinguished in grade I and IV astrocytic tumors, with respectively 46.15% and 61.90% of positive cases.

p21^{Ras} protein detection was preponderant in Astrocytomas Grade II (positive index=37.71%), being absent in high-grade tumors (III and IV).

The EGFR overexpression and p53 mutation configured mutually exclusive events in astrocytomas tumorigenesis, as well as p21^{Ras} protein and ErbB receptors family overexpression.

High positive index for enzymes MGMT, GST π and TS was evidenced in astrocytic tumors. MGMT expression scores were high and constant among different histological categories, including non-tumoral specimens (LI mean = 69.43).

GST π scores demonstrated tendency to reduction in accordance with malignant evolution of astrocytomas,

while the values for TS reached higher levels on Astrocytomas Grade IV (H mean=63.33).

Topol α positive index demonstrated inclination to augment in agreement with the progression of astrocytic tumors, whereas the staining scores had been similar in grade II, III and IV astrocytomas (LI mean=27.71).

The results obtained by current investigation indicated Ki-67 antigen as the best cell proliferation marker. The p53 mutation configured an initial and relevant event in astrocytomas, as well as potential indicative of tumor progression. p21^{WAF1/CIP1} tumor suppressor detection represented important resource for deduction of functional situation of p53 gene, while the p27^{KIP1} functional activation was not compromised by astrocytomas tumorigenic process. Astrocytomas Bcl-2/Bax ratio denoted increasing of cellular survival orientation in accordance with malignant evolution of these tumors.

p21^{Ras} protein overexpression was distinguished as a grade II typical molecular event and a virtual marker of tumor not-progression.

Cytoplasmic accumulation of c-Myc protein configured initial and significant phenomenon in astrocytomas tumorigenesis, being a direct reflex of the nuclear expression of c-myc gene and the tumoral malignance.

The combined analysis of the investigated molecular markers confirmed p53 gene mutation as the main tumorigenic pathway of astrocytomas, even though EGFR overexpression has been the predominant alteration in grade IV tumors and the c-myc gene expression has represented a distinct and alternative molecular pathway to different tumor graduations.

The remarkable presence of MGMT, GST π and TS enzymes configured virtual indication of chemoresistance for many antineoplastic agents, while the high expression of Topol α revealed this enzyme as a potential therapeutic target in the astrocytic tumors

KEY WORDS: astrocytoma, immunohistochemistry, molecular markers, tumorigenesis, tumoral resistance.

*Estudo imuno-histoquímico das alterações moleculares nos tumores astrocíticos: vias tumorigênicas e indicadores de resistência (Resumo). Dissertação de Mestrado, Universidade Federal do Ceará (Área: Neuropatologia, Biologia Molecular). Orientador: Manoel Odorico de Moraes Filho. Co-Orientador: Silvia Helena Barem Rabenhorst.

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STOMATOLOGIC CONDITIONS EVALUATION IN PATIENTS WITH CONGENITAL HYDROCEPHALUS (ABSTRACT) * DISSERTATION . ARACAJU, 2005.

MARIA AUXILIADORA SILVA PEREIRA **

The aim of this study was to evaluate the stomatologic conditions of patients with congenital hydrocephalus.

Thirty children with congenital hydrocephalus were examined with ages between 2 and 6.5 years, from both genders, admitted at Governador João Alves Filho

General Hospital and in the University Hospital in the city of Aracaju -Sergipe and 34 children from both genders were included also.

It was analyzed with a clinical examination the variables related to the gingival bleeding index, oral hygiene index, the ceod-index, for the presence of dental anomalies, eruption timing, soft tissue alterations and palatus. The data collected were analyzed with the t test qui square and Fisher and $p < 0.05$.

The results obtained showed that in the Group of Patients with Congenital Hydrocephalus (GPCH) (48%) there was a predominance of moderate gingivitis, while in the majority of healthy children (74%), there was not any gingivitis ($p < 0.05$), with statistic difference, the oral hygiene was regular with the GPCH (50%) and good with healthy children (73%), also seen statistical differences. In case of the ceod-d index, it was not observed any significant statistical differences, being

the ceo-d total of 1.53 and 1.44 for the GPCH and for the healthy children, respectively. However, it was informed that they did not see any fillings on any teeth of the GPCH proving a significant statistical difference, but the presence of squamous tongue, fissured tongue, labial frenulum and late eruption were verified only on children with congenital hydrocephalus. The atresic palatus was most prevalent in these patients comparing to the healthy children.

Therefore, the children with congenital hydrocephalus presented worst oral healthy conditions than the healthy children, suggesting they belong to a group of patients with special needs, by that, being fundamental a greater attention to the oral healthy, with the participation of the dentist in the team involved on the care of these patients.

KEY WORDS: children, congenital hydrocephalus, caries dental, gingivitis.

*Avaliação das condições estomatológicas de pacientes portadores de hidrocefalia congênita (Resumo). Dissertação de Mestrado. Universidade Federal de Sergipe. (Área : Neurologia). Orientador: Carlos Umberto Pereira. Colaborador: Sônia Maria Alves Novais.

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OLFACTORY GROOVE MENINGIOMA: CORRELATION BETWEEN TUMORAL VOLUME, EDEMA VOLUME, PROLIFERATIVE INDEX AND VASCULAR ENDOTHELIAL GROWTH FACTOR (ABSTRACT)*. THESIS. SÃO PAULO, 2005.

MANOEL ANTONIO DE PAIVA NETO **

Objective: The aim of this study is to correlate demographic (sex and age), radiologic features (tumoral and edema volumes, frontal skullbase invasion) and immunohistochemical expression of Mib-1 and vascular endothelial growth factor (VEGF).

Method: There were analysed demographic and radiological features of 22 patients with olfactory groove meningioma. Fifteen paraffin-embed tumors were studied by immunohistochemical methods for the expression of vascular endothelial growth factor and proliferative index by the Mib-1. Statistical program was used to correlate demographic and radiological features with the proliferative index and vascular endothelial growth factor expression.

Results: There was a statistically positive correlation between tumoral and edema volumes. The tumoral and edema volumes were significantly larger in the male sex.

There was no correlation between Mib-1, tumoral volume, tumoral edema and frontal skullbase abnormalities. The tumoral volume and the edema volume were larger in patients with vascular endothelial growth factor expression. Two cases with tumor recurrence had proliferative indices higher than the mean index of this study, and hyperostosis of the frontal skullbase.

Conclusion: Larger tumors were more susceptible to develop peritumoral edema, also the male gender. The proliferative index has no correlation with tumoral and edema volumes, but probably it is associated with tumoral recurrence. Vascular endothelial growth factor expression is an important factor in edema formation and growth of these tumors.

KEY WORDS: meningioma, olfactory groove, proliferative index, vascular endothelial growth factor, edema.

*Meningeoma de goteira olfatória: relação entre volume tumoral, volume de edema, índice proliferativo celular e fator de crescimento endotelial vascular (Resumo). Tese de Mestrado, Universidade Federal de São Paulo – Escola Paulista de Medicina (Área: Neurocirurgia). Orientador: Oswaldo Inácio de Tella Jr.

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