IMMUNOHISTOCHEMICAL ANALYSIS OF PROGESTERONE RECEPTOR EXPRESSION AND Ki-67 LABELING INDEX IN ASTROCYTOMAS

Abstract

Objectives: Assessment of progesterone receptor expression in astrocytomas in a group of Egyptian patients and evaluation of it's expression in relation to the tumour proliferative potential as assessed by Ki-67 labeling index.

Material and Methods: Forty cases of astorcytic gliomas were collected and assessed for tumor type, grade, progesterone receptor expression and ki-67 labeling index.

Results: Among the studied sample, 10% of cases were pilocytic type, 20% Diffuse type, 27.5% Anaplastic type and 42.5% Glioblastoma Muitiforme. PR was positively expressed in 45% of cases and was correlated significantly with high grade tumours. Twenty one cases (52.9%) showed a low Ki-67 LI while 19 cases (47.5%) showed high ki-67 LI. PR positive tumours had significantly higher mean ki-67 LI (33.5%) compared with PR negative tumours (13.2%).

Conclusions and Recommendations: Astrocytic tumours express progesterone receptor immunoreativity with a direct correlation between PR expression and tumour grade. Also, PR positive astrocytic tumours possess a higher proliferative potential than PR negative tumours. Further study is needed to clarify the role of PR in astrocytic tumour recurrence and patient survival. Additional studies are needed to clarify the role of sex steroids in brain tumour growth and development.