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O-ONC-33 - Glioblastoma and autophagy: Analysis of SQSTM1 gene expression and its association with prognosis in a series of 68 cases

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Resumen

Objectives: Glioblastoma is the most common primary brain tumour in adults. In spite of new surgical techniques and medical treatments, their effective impact on patients' survival is insufficient. In this way, a better knowledge of the autophagy related genes and proteins could provide us valuable information about progression markers or disease outcome predictors. We analyse the correlation between the autophagy related SQSTM1 gene and its protein (p62), and the clinical biological behavior and survival in a group of glioblastoma patients.

Material and methods: We designed a retrospective study on a series of 68 cases. Women/men ratio was 1.13/1, with an average age of 63 years; range, 27-79 years. We examined the expression of p62 protein with western blot. All the data were statistically assessed with SPSS23. We used Pearson's chi-square-test and Kaplan-Meier survival curves.

Results: p62 showed an extensive lack of expression in 78% of cases and a very poor expression in 19% cases. Only 1/68 Glioblastoma samples showed normal expression of p62. In our series, the statistical analysis showed that neither patient, demographics tumor location nor type of treatment were associated to p62 expression ($p > 0.05$). Patients with normal to moderate alteration of p62 expression showed a trend towards statistical significance for higher survival than those with poor expression.

Conclusions: Cell autophagy is essential for the maintenance of cellular homeostasis. Its dysfunction has been related with physiological changes associated with tumor development. Even though further work is necessary, we think that p62 protein and its pattern of expression may have an important role in the diagnostic and prognostic of glioblastoma.