P04.04. FSTL5 EXPRESSION IS A MARKER OF GROUP C METASTATIC MEDULLOBLASTOMAS
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INTRODUCTION: Medulloblastoma (MB) is the most common malignant brain tumor in children. Four different molecular subgroups are recognized, which differ in gene expression, genomic aberrations, histology, demographics and survival: WNT and SHH groups, that have specific mutations in the pathway from which its name, and groups C and D, which have many genetic alterations but not specific to a single pathway. The gene for follistatin-like protein 5, FSTL5, is overexpressed in subtypes non-SHH/non-WNT MBs. Both are significantly associated with reduced event-free and overall survival in non-WNT/non-SHH medulloblastoma, that are poorly characterized. The major aim of this project is to study the molecular features of metastatic pediatric MBs. METHODS: We investigated the protein expression of biomarker involved in metastatic pathways by immunohistochemistry and FSTL5 expression level by RT-PCR in 26 metastatic MBs samples and correlated these data with the outcomes by Kaplan-Meier statistic analysis. RESULT: 83% of Group C MBs showed high level of FSTL5 while none of these presented low-expression. Low expression level of FSTL5 was find in 60% of SHH MBs and none showed over-expression. Kaplan-Meier test revealed that low expression of FSTL5 was associated with good prognosis and the co-presence of FSTL5 with other metastatic factors correlated with poorer prognosis. CONCLUSION: FSTL5 is a marker of Group C in metastatic Medulloblastomas at the onset and the results highlighted decreased FSTL5 expression as a marker of good prognosis. Group C MBs have a characteristic molecular features that confirm the poorest outcome also in metastatic Medulloblastomas at the onset.