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Poster Presentation

Tumour Associated Macrophages and Vasculogenic Mimicry: A New Insight in Glioblastoma Treatment

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Abstract

Glioblastoma is one of the most common brain tumors in adults with poor prognosis, aggressiveness, and treatment resistance. Vasculogenic mimicry (VM) consists of generating vascular-like channels by tumor cells, independent of endothelial angiogenesis. studies showed in glioblastoma, the proportion of VM to all vascular channels is associated with poor prognosis and higher invasiveness levels. Tumor-associated macrophages (TAM) play a homeostatic role in glioblastoma maintenance and growth by producing immunosuppressive microenvironment and pro-angiogenic factors. In comparison with low-grade glioma, the number of macrophages in glioblastoma is higher in correlating with a tumour vascular density. Up-regulation of VM markers and increased interleukin 6-type (IL-6) production were observed in tumor–macrophage coculture. Although it's indicated that TAM induces VM formation through IL-6, but more studies is needed to clarify the signaling pathways between TAM and VM formation. It can make new insights in glioblastoma treatment in the future.

Keywords: Vasculogenic Mimicry, Glioblastoma, Macrophage

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