Risperidone

Risperidone is a commonly used antipsychotic drug in clinic.

Two patients with hydrocephalus and learning difficulties who were admitted to the neurosurgical unit with a suspected cerebrospinal fluid shunt malfunction and raised intracranial pressure. They had both been commenced on risperidone for the treatment of aggressive outbursts. Twelve days after commencing risperidone, the first patient developed symptoms of headache, nausea, vomiting, drowsiness, lethargy and two episodes of collapse. The second patient presented with similar symptoms 4 days after his risperidone dose was increased. An unnecessary shunt exploration was averted in both cases when it was noted that the side-effect profile of risperidone mimicked exactly those of shunt malfunction. Discontinuation of the drug resulted in complete resolution of all symptoms within 72 h. Many patients with shunted hydrocephalus have associated developmental disorders that may warrant treatment with risperidone. Clinicians should be aware of the potential symptom overlap between shunt malfunction and risperidone side-effects in these patients ¹⁾.

Previous studies have found that risperidone has a potential of enhancing differentiation of neural stem cells (NSCs). Malignant gliomas are associated with poor prognosis, largely due to the presence of glioma stem like cells (GSLCs), which share many properties with adult NSCs. Hence, Peng et al. aimed to investigate the effects of risperidone on the self-renewal and differentiation of GSLCs and the underlying mechanisms. The data showed that risperidone inhibited self-renewal and induced differentiation of GSLCs into oligodendrocyte-like cells, which expressed typical markers for oligodendrocytes in vitro. Moreover, risperidone inhibited the GSLCs-initiated gliomagenesis in vivo. Risperidone treatment decreased activity of Beta Catenin, and increased intracellular Ca2+ concentration, stromal interaction molecule 1 (STIM1), and calcium-sensing receptor (CaSR), suggesting the involvement of Wnt signaling. Taken together, these study suggests that risperidone may promote differentiation of glioma stem-like cells through the Wnt signaling pathway².

1)

Edwards RJ, Pople IK. Side-effects of risperidone therapy mimicking cerebrospinal fluid shunt malfunction: implications for clinical monitoring and management. J Psychopharmacol. 2002 Jun;16(2):177-9. PubMed PMID: 12095077.

Peng H, Jiang B, Zhao J, Chen B, Wang P. Risperidone promotes differentiation of glioma stem-like cells through the Wnt signaling pathway. Tumour Biol. 2015 Jan 18. [Epub ahead of print] PubMed PMID: 25596706.

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