Methadone

Methadone has a long half-life and hence a longer duration of action than morphine. This results in a higher risk of accumulation, so it is usually prescribed once daily. It is less sedating, and is worth trying in some patients on morphine who have poor pain control or excessive adverse effects. Due to the risk of accumulation adverse effects may have a delayed appearance.

It was suggested that D, L-Methadone might improve the clinical course of glioma patients. Owing to massive press coverage, patients demand the prescription of D, L-Methadone, but regarding its adjunctive use in glioma therapy there is no standard medication plan. Furthermore, it is not known which side effects the administration of D, L-Methadone might harbor, especially if the patients are opioid-naïve and if D, L-Methadone therapy was managed by the patients themselves or their general practitioners. Opioid-naïve patients with high-grade glioma (new diagnosis or recurrent) receiving D, L-Methadone were included in this retrospective observational analysis. Side effects were assigned if the condition deteriorated in conjunction with the initiation of D, L-Methadone and resolved/ ameliorated after cessation of the intake/reduction of the dosage. Side effects were categorized according to the common toxicity criteria (CTC). Twenty-four patients were included. All patients were opioid-naïve and received D, L-Methadone from their general practitioners. Sixteen patients experienced side effects. The median dosage when side effects began to occur was 15.8 mg/ 24 h. Fatigue and mood changes were reported most frequently (14 of 24 patients). Five patients had severe side effects related to relatively high doses. In all cases, symptoms resolved after cessation or dose reduction. Our results show that D/L M intake lead to frequent occurrence of side effects in opioid-naïve patients especially when not handled with caution and close supervision. Patients, their relatives, their GPs and neuro-oncologists need to be informed about the broad spectrum of side effects in order to thoroughly counsel glioma patients [1)].

D,L-methadone has been put forward as adjuvant treatment in glioblastoma (GBM).

Brawanski et al., from the University Hospital Regensburg analyzed the μ-opioid receptor expression in a set of GBM cell lines and investigated the efficacy of D,L-methadone alone and in combination with temozolomide (TMZ).

Expression of the μ-opioid receptor was similar in the tested cell lines. High concentrations of D,L-methadone induced apoptosis in all cell lines and showed treatment interaction with TMZ. However, in lower dosages, reflecting clinically attainable concentrations, D,L-methadone alone showed no efficacy, and induced even higher proliferation in one specific cell line. Also, no interaction with TMZ was observed. These results suggest caution to the premature use of D,L-methadone in the treatment of GBM patients [2)].

References

1)
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