

EPID-11. SYSTEMATIC REVIEW ON TREATMENT-RELATED HAEMATOLOGICAL ADVERSE EVENTS AFTER TEMOZOLOMIDE FOR A CNS TUMOUR

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Abstract

BACKGROUND

Temozolomide is a widely used alkylating cytostatic drug for CNS tumours. Severe treatment-related haematological adverse events (tHAE) after the application of temozolomide are reported whilst the true incidence is elusive. The aim of this study is to determine the incidence, the risk-factors for, and course of secondary haematological adverse events after treatment with temozolomide in patients with CNS tumours.

METHODS

We reviewed the English literature between 1995–2016 on cases describing treatment-related haematological adverse events after temozolomide and set up a country-wide survey among (paediatric) neuro-oncologists in the Netherlands.

RESULTS

In 20 out of 199 manuscripts deriving from the literature search 26 cases (age 0–69, median 40,5 years) were found with a severe tHAE event after temozolomide: 5 aplastic anemia, 5 acute lymphoblastic leukemia, 9 acute myeloblastic leukemia, 1 diffuse large B-cell lymphoma, 6 myelodysplastic syndrome and 1 mixed lineage leukemia. Karyotype was detected in 17/26 cases, mainly monosomy 5&7. Quality check of the literature mainly showed missing data on predisposing family history. Seven additional cases of a t-HAE after TMZ in CNS a tumour were discovered via a clinical survey in the Netherlands. The median latency in developing a t-HAE was 14 months, the survival after t-HAE was median 4,5 months.

CONCLUSIONS

tHAE is rare and develops relatively early after treatment with temozolomide, while insufficient insight could be found for risk-factors for a t-HAE after temozolomide. Although most patients die from their secondary tHAE, its course differs substantially between individual cases.

Topic: [acute lymphocytic leukemia](#), [leukemia](#), [myelocytic](#), [acute](#), [karyotype determination procedure](#), [aplastic anemia](#), [central nervous system neoplasms](#), [death](#), [leukemia](#), [diffuse large b-cell lymphoma](#), [monosomy](#), [dysmyelopoietic syndromes](#), [netherlands](#), [pediatrics](#), [risk factors](#), [neoplasms](#), [temozolomide](#), [cytostatic agents](#), [adverse event](#), [oncologists](#), [missing data](#)

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