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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