

Prophylactic antiepileptic treatment of seizures for patients with primary brain tumors or brain metastasis when oral and intravenous access is not possible - a literature review.

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Background: Quite a few patients with primary brain tumors or brain metastases experience seizures. Seizures can have a big impact on quality-of-life (QOL). The standard of care for patients who have experienced clinical obvious seizures, involves administration of a prophylactic antiepileptic drug.

Aims and objectives: The aim of this study was to determine how the prevention of seizures in terminally ill adult patients with primary brain tumors or brain metastases can and should be managed, when oral and intravenous access is no longer possible.

Our hope was to find literature and guidelines that described a way to manage seizures in this patient group, without causing unnecessary sedation, and in that way possibly improve QOL for the patient and the caregivers.

Methods: A systematic literature review in PubMed, was performed. In addition we asked our Scandinavian colleagues, through a questionnaire, how they would treat this patient group. Finally we did a national search of guidelines and found one in Internal Medicine regarding the topic.

Results: Nine papers were identified. They were a combination of literature reviews, observational studies and case reports. Five articles highlighted subcutaneous Levetiracetam. One article mentioned Clonazepam, Phenobarbital or Midazolam as options. One article featured buccal Clonazepam as an option. One article suggested rectal Valproat, rectal Carbamazepin or rectal or subcutaneous Phenobarbital. One article suggested several options, administered either sublingually, per rectum or subcutaneously, without any first line of choice. The majority of our colleagues in the NSCPM selected Midazolam (34%) subcutaneously or Carbamazepin (13%) as prophylactic treatment. In the instructions of the Danish Group of General Medicine prophylactic Lamotrigine or Levetiracetam was recommended, without mentioning the administration route.

Conclusion: It is still up for discussion whether prophylactic treatment should be discontinued when oral medication is no longer an option. However, the literature on the topic is still very limited and randomized controlled trials are needed to determine the optimal treatment for these fragile patients.