

Chairperson's Introduction

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Central nervous system (CNS) complications of cancer are manifold. They can be caused by metastatic disease to the CNS, but also by toxic effects of anticancer treatment and, more rarely, by remote effects of the cancer (paraneoplastic conditions). Especially metastatic CNS complications are a source of significant morbidity, since they often have a huge impact on the quality of life of these patients. Treatment decisions can be difficult however, as many of these complications arise in patients with widespread metastatic disease and treatment decisions need to take the entire clinical situation of the patient into account. For instance, half of the patients with brain metastases die of their systemic disease, and improving the outcome of the brain metastases is unlikely to affect survival unless the systemic disease is controlled. Decisions to refer patients for intensive local treatment like surgery or stereotactic radiosurgery of brain metastases should therefore always take the extent of systemic disease into account. Nonetheless, it is crucial to realise that controlling neurological signs and symptoms is essential to maintain the quality of life of patients that develop neurological complications of cancer. This requires early diagnosis of CNS complications, and a low threshold for referral to a neurologist and for neuro-imaging. Any cancer patient that develops backache, headache or focal deficits needs to be further investigated: delaying diagnosis of brain metastases or spinal cord compression puts the patient at risk for deterioration. It is important to realise that once deficits occur it is uncertain if these will be reversible even if treated adequately. The CNS has little capacity for repair, and an early diagnosis and treatment is the best way to prevent irreversible focal deficits.

The educational section on the management of CNS complications of cancer will be focussed on the diagnosis and treatment of both metastatic and remote (paraneoplastic) CNS complications. The topics are leptomeningeal metastases, metastatic epidural spinal cord compression, brain metastases and paraneoplastic neurological syndromes. The management of those

complications still pose controversies, and although for some of these complications evidence based medicine guidelines have been developed, the introduction of these guidelines can still be a formidable challenge. This concerns, in particular, the introduction of spine surgery in metastatic spinal cord compression.

The present session will critically review the role of systemic and intrathecal chemotherapy in leptomeningeal disease. In this condition a balance between prognosis and treatment is essential, and the role of intrathecal chemotherapy is far from clear. Surgery for spinal cord compression due to epidural metastases, however, was recently proven to be of clear benefit in selected patients; patient selection is therefore crucial. In addition, setting up a structure in which those patients can be operated upon without undue delay is pivotal. Intensive treatment of brain metastases is indicated in some patients, since they benefit from lasting local control. Again, patient selection is crucial. Here, the role of surgery versus radiosurgery in case of single brain metastases, and whether that should be followed by whole brain radiotherapy are still matters of debate. Lastly, several novel antibodies associated with paraneoplastic disorders have been identified. Although treatment options for many patients with paraneoplastic neurological disorders are unclear, some patients do benefit from systemic treatment and from immunotherapy. The session will give an update on these disorders, summarising these novel developments and will give treatment recommendations. All presentations are given by experts in the field. Attendants to this session will obtain state of the art knowledge of the CNS complications of cancer.

Conflict of interest statement

The author has been active on an advisory board of Mundipharma, and has given a lecture during a minisymposium of Mundipharma.