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ELSEVIER FULL-TEXT ARTICLE

Treatment modalities for leptomeningeal metastases.

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Secondary involvement of the leptomeninges represents an infrequent but devastating (and nearly always fatal) complication of solid tumors, hematologic malignancies (both leukemia and lymphoma), and primary brain tumors. Clinical suspicion of neoplastic meningitis (NM) may be raised by the appearance of multivariate neurological symptoms; however, a definitive diagnosis is often difficult to obtain. Improved treatments for primary malignancies and advances in diagnostic imaging technology have led to an apparent increase in the number of patients diagnosed with NM. Unfortunately, therapeutic options remain limited, particularly for patients with chemoresistant tumors. Optimized treatment remains controversial and may rely upon a combination of chemotherapy (intrathecal and/or intravenous) and concurrent focal radiotherapy. This review discusses the advantages and disadvantages of intra-cerebrospinal fluid (CSF) versus systemic strategies for treating NM. Clinical trial evidence is presented for the different treatment modalities. In addition, the therapeutic potential of intra-CSF therapy for cancer prophylaxis is discussed. Earlier diagnosis and more aggressive preventive treatment regimens may provide substantial increases in survival and favorably affect quality of life. Additional data from large-scale, well-controlled trials are required to more accurately assess the efficacy of intra-CSF versus systemic treatment in NM. Future treatment options using novel targets for intra-CSF therapy will be addressed as well.

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