Concurrent intrathecal methotrexate and liposomal cytarabine for leptomeningeal metastasis from solid tumors: a retrospective cohort study.


Abstract
Leptomeningeal metastasis (LM) from solid tumors is typically a late manifestation of systemic cancer with limited survival. Randomized trials comparing single agent intrathecal methotrexate to liposomal cytarabine have shown similar efficacy and tolerability. We hypothesized that combination intrathecal chemotherapy would be a safe and tolerable option in solid tumor LM. We conducted a retrospective cohort study of combination IT chemotherapy in solid tumor LM at a single institution between April 2010 and July 2012. In addition to therapies directed at active systemic disease, each subject received IT liposomal cytarabine plus IT methotrexate with dexamethasone premedication. Patient characteristics, survival outcomes and toxicities were determined by systematic chart review. Thirty subjects were treated during the study period. The most common cancer types were breast 15 (50 %), glioblastoma 6 (20 %), and lung 5 (17 %). Cytologic clearance was achieved in 6 (33 %). Median non-glioblastoma overall survival was 30.2 weeks (n = 18; range 3.9-73.4), and did not differ significantly by tumor type. Median time to neurologic progression was 7 weeks (n = 8; range 0.9-57), with 10 subjects (56 %) experiencing death from systemic disease without progression of LM. Age less than 60 was associated with longer overall survival (p = 0.01). Six (21 %) experienced grade III toxicities during treatment, most commonly meningitis 2 (7 %). Combination IT chemotherapy was feasible in this small retrospective cohort. Prospective evaluation is necessary to determine tolerability, the impact on quality of life and neurocognitive outcomes or any survival benefit when compared to single agent IT chemotherapy.

PMID: 24942463 [PubMed - indexed for MEDLINE]