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2338. Infections caused by live vaccines in cancer research

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Background. Live vaccines have been used and are currently studied as possible therapies for localized and metastatic cancers. Their use as primary prevention remains controversial due to the immunosuppression of cancer patients. Active infections could be associated to their use in treating or preventing cancer. Our study evaluates 2 patients who received live vaccines for cancer therapy and developed active infections.

Methods. The purpose of our study was to highlight the importance of considering live vaccines as a source of bacteremia and viremia when used as therapy in cancer patients. We present 2 cases, one with pancreatic cancer who received live-attenuated *Listeria monocytogenes* vaccine and another one with Glioblastoma Multiforme who received live Adenovirus vaccine.

Results. Our first patient was a 67 year-old female with locally advanced, unresectable pancreatic cancer who was started on therapy with live-attenuated *Listeria*

monocytogenes vaccine. She presented to our facility with a chief complaint of fever, headaches, diarrhea, and abdominal pain. Her blood cultures grew *Listeria monocytogenes* despite taking prophylactic oral ampicillin after live vaccine infusion 2 months prior. She was treated successfully with intravenous ampicillin leading to resolution of symptoms as well as bacteremia.

Our second patient is a 58 year-old male patient with a history of recurrent glioblastoma multiforme despite chemoradiation. He received intra-lesional Adenovirus injection 2 weeks before admission. He was admitted to our facility with a 1-week history of fever, fatigue, nausea, vomiting, as well as 2 days of altered mental status. CSF analysis showed 290 leukocytes with a lymphocyte predominance, CSF PCR and blood PCR were positive for Adenovirus with more than 10 million copies in CSF. He improved back to his baseline mentation without fever 2 weeks later. He did not receive antiviral therapy.

Conclusion. It is crucial to monitor cancer patients undergoing therapy with live vaccines for the possible development of active vaccine induced disease. Also it is important to test for the organisms used in the specific vaccines if a patient presents with signs and symptoms of a possible infection. In some cases withholding therapy directed against the live vaccine may be indicated to maximize the anti-cancer effects.

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