

EPIDEMIOLOGY OF SPORADIC NONPERINATAL LISTERIOSIS: WHAT IS THE ROLE OF CANCER?

Listeriosis occurs more frequently in persons with impaired cell-mediated immunity. Persons with cancer are known to be at increased risk for listeriosis. This study investigated the role of cancer in the epidemiology of sporadic nonperinatal listeriosis reported to the Los Angeles between 1986 and 1997.

A case of sporadic nonperinatal listeriosis was defined as a clinically compatible and culture-confirmed case of listeriosis that was not associated with pregnancy or an outbreak. Surveillance staff contacted hospitals and laboratories in LAC semi-monthly to identify all cases. Cases were interviewed for risk data such as food history, underlying medical conditions, and medications. Steroid usage was defined as any steroid preparation mentioned one month prior to the onset of listeriosis. Cases with a history of cancer were matched with the Southern California Cancer Registry, and information on cancer type and onset date was verified. Cases were geocoded by address and aggregated into census tracts.

During the 11-year study period, a total of 394 nonperinatal listeriosis patients were identified. Twenty-five percent of the patients had a history of cancer. The most frequent types of cancers were lymphomas (18%) and myelomas or leukemias (16%). One third of cancer patients developed listeriosis within one year of cancer diagnosis. Cancer patients were not different from non-cancer patients in age (63 vs. 59 years old), gender ratio (male vs. female: 1 to 0.6), or history of Mexican-style cheese or soft cheese ingestion. However, cancer patients with *Listeria* were more likely than non-cancer patients to be White (74% vs. 53%, $p=0.001$), and to have a higher case-fatality ratio (45% vs. 27%, $p=0.001$). Chemotherapy or radiation treatment in the month preceding the onset of listeriosis (63% vs. 1.7%, $p=0.001$), or steroid usage (51% vs. 41%, $p=0.018$) was significantly more prevalent among cancer patients. No significant difference between the geographic distribution of cancer and non-cancer patients was noted.

This study provides strong supportive evidence for the important role of cancer in the epidemiology of sporadic nonperinatal listeriosis. Although data on specific cancer treatments was incomplete, the high concomitant use of steroids among cancer patients may play as much a role as the underlying malignancy itself. Future studies are needed to evaluate the differential role of cancer itself versus its treatment in developing listeriosis. Preventive efforts should especially target newly diagnosed cancer patients following therapeutic interventions. Reasons for the increased risk for listeriosis among White cancer patients remain unclear.