Merkel Cell Virus May Be Target for Treatment

BY BRUCE JANCIN

MADRID — The discovery of a new virus that appears to play a causative role in most cases of Merkel cell carcinoma has brought a new sense of optimism regarding this aggressive neoplasm.

"The discovery of the Merkel cell polyomavirus could be a major breakthrough. It could hopefully lead to new, more successful treatments," Dr. Ingrid Wolf said at the 13th World Congress on Cancers of the Skin.

Discovery of the Merkel cell polyomavirus (MCPyV) might lead to a preventive vaccine, interferon therapy, or serologic screening for targeted surveillance, said Dr. Wolf, a dermatologist at the University of Graz (Austria).

She provided a case report on a patient with multiple nodular lesions on the arm. The largest lesion was excised while the rest were treated with daily injections of interferon-beta for 5 weeks with no adjuvant radiation or chemotherapy. The lesions have regressed, and the patient has since gone 8 years without relapse or recurrence, she said at the meeting, sponsored by the Skin Cancer Foundation. The discovery of MCPyV provides a mechanistic basis for this success story.

MCPyV was discovered by the same investigators who found a new oncogenic herpesvirus that causes Kaposi's sarcoma, both HIV-related and non-HIV-related (N. Engl. J. Med. 2005;332:1181-5).

The researchers surmised that MCPyV is likely to play an etiologic role in Merkel cell carcinoma because the virus is clonally integrated in the tumor genome (Science 2008;319:1096-100). This suggests that MCPyV is involved in clonal expansion of the tumor. The group's findings have been confirmed and expanded upon in other laboratories. It is now apparent that MCPyV is present in 70%-80% of Merkel cell carcinomas.

At the Madrid congress, Dr. M. Teresa Fernandez-Figueras noted that a recent analysis of more than 3 decades of Surveillance, Epidemiology, and End Results (SEER) registry data indicated there

'The discovery of the Merkel cell polyomavirus could be a major breakthrough' that could lead to new treatments.

DR. WOLF

are about 1,500 new cases of Merkel cell carcinoma per year in the United States, where the incidence is growing at 8% annually (J. Cutan. Pathol. 2010;37:20-7).

This trend is consistent with two broad population trends: the graying of society and the steadily increasing population of immunosuppressed individuals. The risk of Merkel cell carcinoma has been estimated to be increased 8-fold in HIV-positive patients, 10-fold in organ transplant recipients, and at least 20-fold in patients with chronic lymphocytic leukemia. The other major risk factor for Merkel cell carcinoma is age greater than 60 years. The most common site is the head and neck, reflecting the tumor's predilection for UV-damaged skin. In the SEER analysis, 62% of the patients were men, and nearly 97% of cases occurred in whites.

MCPyV, like other polyomaviruses, is a small DNA virus. Infection by the virus is widespread: Serum antibodies are present in 80% of individuals over age 50 and 50% of those less than 15 years old. The overall 5-year mortality of Merkel cell carcinoma is 33%.

Tumor stage at diagnosis is the chief determinant of prognosis. The 5-year survival rate ranges from 79% for patients with tumors 2 cm or less and no lymph node involvement to 26%-42% with regional nodal involvement to 10%-18% for stage IV disease marked by distant metastasis, said Dr. Fernandez-Figueras of the Autonomous University of Barcelona.

It's important to note that the biologic behavior of Merkel cell carcinoma is the same regardless of whether a tumor is associated with MCPyV, she stressed. ■

Disclosures: *Dr. Wolf and Dr. Fernandez-Figueras said that they had no financial conflicts.*