

BMT and no vaccine-related serious adverse events occurred. Neither allo or autologous transplant recipients had demonstrable antibodies against pertussis 1 year following BMT and immunogenicity of the pertussis component of Tdap was poor, even following 3 doses, despite good immune responses to Td. While a correlate of protection from pertussis is not known, observed responses to Tdap following both allo and auto BMT raise concern that even a 3-dose series of Tdap may not provide full protection in this population. Further studies are needed to establish optimal immunization timing and schedule of Tdap required to ensure protection in this vulnerable population.

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Varicella Zoster Virus CNS Disease in Hematopoietic Cell Transplantation: A Single Center Experience

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Background: *Varicella Zoster Virus* (VZV) can lead to serious complications in Hematopoietic Cell Transplant (HCT) recipients. Central nervous system (CNS) VZV can be one of the most devastating infections in transplant recipients, yet little is known about this rare disease.

Objectives: To describe CNS VZV in the post-transplant period and to define potential risk factors in the HCT population.

Methods: We reviewed the course of all patients who received a first HCT at the Fred Hutchinson Cancer Center (FHCC) in Seattle, WA from 1/1996 through 12/2007. Data were collected retrospectively using the Long-Term Follow-Up database, which includes on-site examinations, outside records, laboratory tests, and yearly questionnaires. Patients were classified as CNS VZV if they had laboratory confirmation of VZV in the cerebrospinal fluid (CSF), or had zoster with associated clinical and laboratory findings consistent with CNS disease.

Results: A total of six patients developed VZV CNS disease during the evaluation period (table 1). Diagnosis was confirmed in 3/6 by detection of VZV in CSF by PCR. All other patients had a clinical diagnosis based on the presence of CNS symptoms, zoster, lymphocytic pleiocytosis, and response to IV acyclovir. Patients who developed CNS disease had a mean age of 42 years (range 34-51) at time of transplant. CNS disease developed at a mean of 9 months post-transplantation (range 0.5-24 months), and severity varied, ranging from meningitis (3/6) to encephalitis/myelitis (3/6). All had active graft-versus host disease (GHVD) and all were being treated with immunosuppressive therapy at time of diagnosis. Fever and headache were the most common symptoms, but patients who developed focal CNS findings or seizures (3/6) had a more complicated clinical course. While most patients presented with classic

VZV/zoster skin lesions, 2/6 patients had no dermatologic findings associated with their presentation. Four (66%) of patients who developed VZV CNS disease died, two related to VZV complications despite aggressive antiviral therapy.

Conclusions: In this cohort of HCT patients, VZV CNS disease was a rare complication. Mortality due to CNS VZV is high, particularly in patients who develop focal neurologic findings or seizures. Even in the absence of skin lesions, VZV CNS disease should be considered in patients who develop fevers and neurologic symptoms.

Infections in People with HIV

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Current Trends of HIV/AIDS Epidemic in One of the Largest Areas in Russia

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Objective: The aim of the research was a detailed study and analysis of current data and trends of HIV/AIDS epidemiology in one of the largest areas in Central Russia in order to show the growing need for treatment and palliative care for people living with HIV/AIDS in the region.

Methods: We studied the official demographical data and the HIV/AIDS epidemiology data provided by the regional AIDS Centre within the entire period of epidemic and compared it with the official federal statistics.

Results: As for January 2007, the cumulative number of registered HIV cases was 4,870. The actual number of people living with HIV/AIDS is increasing and faster than registered over the last year or two. It is likely that 17,000 - 22,000 people are living with HIV/AIDS in the region. Young people aged 15 to 29 comprise 85.5% of all registered HIV cases. HIV infection was attributed to injection drug use in 73.5% of all registered cases. Since 2002, experts have identified an increase in sexual transmission. In 2006, 49.3% of all registered cases were attributed to sexual contact. Today far more of the HIV-positive individuals are men (56.9%). The most recent and negative trend is the proportion of women infected which has been increasing. In 2006, the proportion of women among newly diagnosed HIV cases was 43.7%. As a result, there is an increase in the potential for a growing mother-to-child HIV transmission. The problem is becoming worse as HIV spreads more widely from vulnerable groups into the general population.

Conclusion: This study demonstrates the major trends in HIV/AIDS epidemic progression and can be used for making estimates and helping policymakers to determine the impact of specific programs in the region.

Abstract 47 – Table 1. Varicella zoster virus CNS disease case descriptions

Age	Onset	Severity	Symptoms/Signs	Skin Rash	MRI Findings	LP findings	Outcome
37 F	Day +153	VZE	Neck stiffness, Encephalopathy, seizures	Yes	Tentorial and trigeminal cave enhancement	↑protein, lymphs	Death, 6.2 months VZE
34 M	24 months	Meningitis	Headache, neck stiffness, fever	Yes	None	↑protein, lymphs	Alive
52 F	Day +83	Meningitis	Headache, neck stiffness, dizziness, fever	No	None	↑protein, lymphs	Death, 4.1 months Aspergillus pneumonia
41 F	Day +15	VZE	Headache, fever, seizures	No	None	–	Death, 5.4 months Recurrent-ALL
45 M	18 months	Meningitis	Headache, fevers	Yes	Bilateral small infarcts	↑protein, lymphs	Alive
42 M	Day +236	Myelitis	Fever, LE numbness	Yes	Hemorrhagic encephalo-myelitis	–	Death, 14.5 months Persistent quadriplegia, Pulmonary Embolus