



Reports of deaths from chickenpox

Most physicians regard varicella as a relatively benign disease. It isn't always. The US Centers for Disease Control and Prevention (CDC) recently reported 3 fatal cases of varicella in young women.¹ We summarize these cases and emphasize the importance of vaccination, early diagnosis and appropriate treatment.

A classic varicella rash developed in a 23-year-old woman in good health roughly 2 weeks after her 2 young unvaccinated children had chickenpox. On day 4 after onset of the rash, shortness of breath and hemoptysis developed. On day 5 a chest x-ray showed diffuse alveolar infiltrates, and oxygen therapy and intravenous acyclovir were started. Intubation was required. The respiratory distress worsened; treatment was continued with oxygen, antibiotics and intravenous acyclovir. On day 12 the rash became hemorrhagic, and disseminated intravascular coagulation and renal failure developed. The patient died 2 days later. Varicella zoster virus was cultured from skin lesions and tracheal aspirate.

A strikingly similar case occurred in a 25-year-old previously healthy woman in whom a classic varicella rash, fever and headache developed about 2 weeks after her young unvaccinated child had chickenpox. A cough developed on day 2, followed by shortness of breath on day 3 and progressive respiratory difficulty and confusion on day 4. A chest x-ray showed bilateral infiltrates and the patient was found to be hypoxemic. Treatment with oxygen and intravenous acyclovir was started; intubation was also required. On day 6 computerized tomography of the brain showed severe, diffuse, cerebral edema. Renal failure and coma developed, and the patient died on day 7.

In the third case, a 32-year-old woman with Crohn disease presented to an emergency department with abdominal and back pain. She had recently had an exacerbation of Crohn disease that was being treated with prednisone (40 mg/d, tapered to 20 mg/d). A mild macular, nonpruritic rash on her back was ignored, and a benign abdominal syndrome was presumptively diagnosed. The abdominal pain

persisted, and the patient was admitted to hospital on day 3; her white blood cell count was elevated, and a maculopapular vesicular rash with crusted lesions was observed on her trunk, head and neck. Varicella was presumptively diagnosed. The patient reported that 2 weeks earlier she had been exposed to her 4-year-old unvaccinated niece who had chickenpox. On day 4 the vesicles became hemorrhagic and the patient began to bleed from intravenous sites. Hypotension and disseminated intravascular coagulation rapidly developed, and the patient died from shock on the same day. Autopsy showed viral inclusion bodies, consistent with varicella, in multiple organs.

These cases illustrate that varicella is potentially fatal. Although fewer than 5% of cases occur in people over age 20, 55% of varicella-related deaths occur in this age group. The CDC recommends that all children be routinely vaccinated at age 12–18 months. The vaccine is not yet available in Canada.

People at increased risk of serious complications from varicella who have been exposed to a case should be given varicella zoster immune globulin within 96 hours of exposure. The earlier the immune globulin is given, the more likely it is that the disease will be attenuated. If varicella develops in an immunocompromised patient, acyclovir should be given, preferably within 24 hours of onset of rash.

Prevention is important: varicella is highly contagious, especially during the 2 days before the rash appears. In the US it is recommended that all children and susceptible adults receive the vaccine. The 3 deaths reported here could have been prevented if the children to whom the young women were exposed had been vaccinated. It is important for Canadians to have access to the vaccine, which has been used in the US since 1995, in Japan since 1984 and is used in various European countries. Health Canada should consider taking steps to encourage manufacturers to license their varicella vaccines in this country. — JH, AMT

Reference

1. Varicella-related deaths among adults — United States, 1997. *MMWR* 1997;46:412-5.