Varicella Pneumonitis in Children with Hemodialysis

J.-L.

Ja-Liang

Lin

Division of Nephrology, Chang Gung Memorial Hospital, Taoyuan, Taiwan, ROC

Ja-Liang Lin, MD, Division of Nephrology, Chang Gung Memorial Hospital, 5, Fu Hsing Street, Kuei-Shan Hsiang, Taoyuan, Taiwan (ROC)

Dear Sir,

Primary varicella visceral dissemination and fatalities are more likely to occur in adult and immunocompromised subjects. Varicella visceral dissemination in children with malignancies and renal transplant have been reported in previous papers [1, 2]. However, visceral dissemination in uremic children is rare. We would like to describe the clinical course of varicella pneumonitis in a uremic child with regular hemodialysis.

A 14-year-old uremic boy was admitted to our ward due to intermittent fever, hemapty-sis, and shortness of breath for 3 days. He did not have any abnormalities on maintenance hemodialysis until 10 days before admission. He developed a cough, rhinorrhea, and general malaise initially. Low grade fever (38.6°C) and vesicle eruptions of the neck, face, and scalp occurred later on. Unfortunately, the clinical condition gradually became worse. Physical examination on admission showed an anemic conjunctiva, coarse moist rales over both lung fields, and multiple scattered vesicles and maculopapules with superficial crusting over the face, neck, scalp, and trunk. Positive findings of laboratory data included hemoglobin 50 g/l (5.0 g/dl), leukocyte count 6,700/ μ l (54% neutrophil, 35% lymphocyte, 5% eosinophil), creatinine 663 μ mol/l (7.5 mg/dl), albumin 23 g/l (2.3 g/dl), and normal electrolytes and liver function tests. Chest X ray demonstrated bilateral diffuse cotton ball and nodular lesion (fig. 1). Both blood culture and sputum culture were negative. Antituberculosis and antibiotic drugs were stopped after the diagnosis of chicken pox was well established by the dermatologist. Hemapty-sis, dyspnea, and fever resolved after symptomatic treatment only. The skin lesions disappeared subsequently. On hospital day 5, the follow-up chest X ray showed clear lung fields (fig. 2). Neither antiviral nor varicella immunoglobulin therapy was performed during this hospitalization period. He was discharged without any sequelae on hospital day 8.

This patient had the typical findings of varicella infection and the unusual varicella pneumonitis lesions. Visceral dissemination of varicella is rare in children except those with malignancies and renal transplant. Underlying diseases and anticancer or antirejection therapeutic agents were implicated as causative factors in the increased severity of varicella [1-3]. T lymphocytes rather than B lymphocytes appear to have been deficient in these patients [1]. Similarly, T lymphocyte function in the presence of serum from uremic patients was found to be impaired in most studies [4]. Our patient was at high risk of visceral dissemination from varicella due to his immunocompromised and poor nutrition state (albumin: 23 g/l). Rate of visceral dissemination from varicella ranges from 20 to 35% in children with an underlying immunodeficiency. Over 20% of these patients will die if they

are not treated with antiviral drugs [5]. Vidarabine, interferon, and acyclovir have a confirmed clinical efficiency [6, 7]. Should passive immunization and antiviral therapy be administered in uremic patients shortly after varicella exposure or before visceral dissemination to prevent unnecessary mortality and morbidity? This question remains to be answered because no related previous reports are available.

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Fig. 1. Chest X ray showed bilateral diffuse cotton ball and nodular lesions on admission day.
Fig. 2. Chest X ray revealed clear lung fields on the 5th hospital day.

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