Sir,
re: Fatal Varicella in Familial Thymic Dysplasia

Varicella zoster infection is generally a mild, benign disease. The majority of fatalities occur in cases affected either by malignant diseases or by primary immunodeficiency (1, 2). A particularly severe course of chickenpox was observed during intensive cytostatic treatment of malignant disorders (3), and was clearly related to a reduction in the number and function of T cells (4). In 1978, we reported in this journal the case of a boy who had been suffering from combined immunodeficiency and had died of progressive vaccinia (5). The boy's brother was subsequently admitted to our department after contracting varicella. He was six months old and had no history of immunodeficiency. During the first four days of the disease there were no extraordinary features apart from a mucocutaneous dermatitis which improved after local treatment. Immunological tests revealed a subnormal number of T lymphocytes (absolute number of E rosette forming cells: 0.54×10^9/l). The lymphocytes could be stimulated by phytohaemagglutinin (stimulation index: 30), and leukocyte migration inhibition by PPD could also be performed (migration index: 0.61). Delayed hypersensitivity reactions were negative both to PHA and PPD. Serum immunoglobulin levels were IgG: 6950 mg/l (normal), IgM: 1320 mg/l (elevated), IgA: 620 mg/l (slightly elevated). Specific varicella antibodies appeared in low concentrations (V–Z IFAMA IgG: 1/10, IgM:1/8). From the fourth day onwards, the patient's condition gradually deteriorated. New varicella vesicles appeared covering the entire body. Haemorrhagic, necrotic pustules appeared but no regular crust developed. Pneumonia, proteinuria, erythrocyturia and hepatomegalia were found. Mucocutaneous mycosis reappeared. The infant died on the eleventh day of his illness.

At the autopsy the typical characteristics of generalized varicella were observed in the skin, mucosa, lungs, and liver. The number of lymphocytes in the thymus was low and without corticomedullary distinction. No Hassal-bodies were present. There were neither follicles nor germinative centres in the lymph nodes and spleen. Stimulated lymphoid cells could be seen in Peyer's plaques. Lymphoid proliferation was found in the liver, and the lymphoid cells presented a precursor appearance. The cell clusters filled up several portal areas and other sites. Several extensive foci consisting of similar cells were seen in the kidneys. Similar lymphoid proliferation was found in the spleen. The histological pattern corresponded to that of malignant lymphoma. We believe that our patient died of generalized varicella caused by congenital immunodeficiency. The autopsy of this child and that of his brother showed thymic dysplasia. Both cases can be classified as severe combined immunodeficiency with B lymphocytes (6). Malignant lymphoma is a frequent complication in primary immunodeficiency (6), and the morphological pattern of this case also suggested malignant lymphoma. One of the most difficult problems in morphological diagnostics is undoubtedly the distinction between a reactive diffuse infiltration with lymphocyte precursor cells in generalized varicella infections and malignant lymphoma. Unfortunately, we did not have the opportunity to demonstrate or exclude a monoclonal proliferation in the tissues (7).

L. Timár, M. D., Ass. Prof. *J. Budai,* M. D., Central Municipal Hospital for Infectious Diseases, Gyáli u 5/7, H-1097 Budapest, Hungary.

Literature

1. **Wallis, K., Gross, M., Herczeg, E.:** Varicella and thymic dysplasia with dysgammaglobulinemia. Acta Paediat. Scand. 61 (1972) 98–104.
2. **Feldman, S., Hughes, W. T., Daniel, C. B.:** Varicella in children with cancer: seventy-seven cases. Pediatrics 56 (1975) 388–397.
3. **Nyerges, G., Mészner, Zs., Molnár, L., Timár, L.:** Infektionskrankheiten bei Immundefektzustand des Kindes. Pädiatrie und Grenzgebiete 19 (1980) 89–96.
4. **Patel, P. A., Yonessi, S., O'Malley, J., Freeman, A., Gershon, A., Ogra, P. L.:** Cell-mediated immunity to varicella-zoster virus infection in subjects with lymphoma or leukemia. J. Pediatr. 94 (1979) 223–230.
5. **Timár, L., Budai, J., Nyerges, G., Szigeti, R., Hollós, I., Sonkoly, I.:** Progressive vaccinia: immunological aspects and transfer factor therapy. Infection 6 (1978) 149–153.
6. World Health Organization: Immunodeficiency. WHO Techn. Rep. Ser. 630 (1978) 21–32.
7. **Warnke, R., Levy, R.:** Immunopathology of follicular lymphomas. N. Engl. J. Med. 298 (1978) 481–486.

Erratum

Line 24, page 219 of the Brief Communication by *C. Spanò, S. Patti* and *P. Mondello* entitled "Hepatitis B Virus Markers in Diabetic Patients: Preliminary Findings in Palermo" in INFECTION 8 (1980) 219–220 should read as follows: " . . . who where being followed up at the Department of Medicine, Villa Sofia Hospital."