

In albino Swiss mice, h.s. No. 1 was the most virulent strain producing typical neurotropic effects with exceptionally small quantities of virus. When levels of the other strains resulted in neither neurotropic signs nor death after intramuscular inoculation of mice, 100 fold less of h.s. No. 1 produced 96% mortality.

In young plasma clot cultures of human fetal brain, h.s. No. 1 was again the most virulent strain. Compared to simultaneous quantitation of strains in RK cultures, 10 to 300 fold less h.s. No. 1 virus was required to infect brain cultures. One of the other strains showed a lesser increase in virulence for human brain relative to the other 3. No difference in virulence of any of the strains was noted in cell cultures of human amnion, diploid lung or green monkey kidney.

These data suggest that inherent differences in the neurotropic capacities of herpes simplex viruses may be a determinant in the production of central nervous disease after infections of man. (SPR)

- 38 *Attenuated Vaccinia in the Elective Primary Vaccination of Eczema Patients.* C. HENRY KEMPE, University of Colorado School of Medicine, Denver, Col.

1009 patients suffering from eczema or other skin disorders have received elective primary vaccination with the CVI-78 strain of vaccinia. The vaccine is attenuated by repeated passage through chick embryos; its infectivity titer is 8.4 (TCID₅₀/ml), and it is free of bacteria. It was administered by one of three routes (multiple pressure, subcutaneously or jet gun) with a minimal dose of TCID₅₀ of 1000 and a maximal dose of TCID₅₀ of 30,000. Local and systemic reactions and temperature elevations in these children were significantly less marked than those experienced with a standard strain of vaccinia in normal children. No virus dissemination or other complications occurred, except for two instances of mild erythema multiforme. Seroconversion was noted in all 387 patients tested to date. Multiple pressure revaccination with a standard strain one to six months later resulted in marked modification in the reaction to the standard strain; no systemic reactions developed. It would appear that CVI strain of vaccinia virus is effective for elective primary vaccination of children suffering from eczema for prevention of eczema vaccinatum. (APS)

- 39 *Severe Illness (Atypical Exanthem) Following Exposure to Natural Measles. 11 Cases in Children Previously Inoculated with Killed Vaccine.* PHILIP R. NADER*, MARSHALL HORWITZ* and JOHN ROUSSEAU*, National Communicable Disease Center USPHS, Atlanta, Ga., and Community Hospital, Riverton, Wyoming (introduced by Richard W. Blumberg).

A cluster of cases of an unusual exanthem with high fever, myalgia, tachypnea and prostration occurred in children in Riverton, Wyoming, in the spring of 1966. The initial macular rash characteristically began on the lower extremities and progressed cephalad. Most cases also developed vesicular lesions which were larger and less discrete than those seen in varicella and did not crust. A purpuric rash was noted in one instance. One child developed pneumonia and another had generalized edema. Epidemiologic investigation revealed that all 11 cases occurred among a group of 97 children who had received three injections of inactivated measles vaccine in 1962. All had a recent exposure to natural measles, their first known exposure since receiving the

inactivated vaccine four years previously. Of 31 children in this group who subsequently received live vaccine, two developed local reactions at the site of injection of live vaccine. Viral isolation attempts in four of the cases were negative. Serial serologic specimens from five atypical cases showed a greater than fourfold rise in CF and HAI measles antibodies in one case and a greater than fourfold fall in four cases. Initial samples in these four cases were obtained one to three weeks after onset of rash. CF antibodies to varicella and herpes simplex remained stable at low or undetectable levels. (APS)

- 40 *Maternal and Neonatal Infection with Cytomegalovirus in Taiwan.* E. RUSSELL ALEXANDER, Univ. of Wash. Sch. of Med., Seattle, Wash., and U.S. Naval Medical Research Unit No. 2.

The prevalence of cytomegalovirus (CMV) infection in normal pregnant women in Taipei was measured by culturing cervical specimens in human diploid fibroblast cells. Eighteen of 100 Chinese women but none of 33 Americans yielded cervical CMV once (15 cases) or more (3 cases) during the second and third trimesters. Multiple urine specimens were examined from 58 of the Chinese and 36 Americans. CMV was recovered from one Chinese and one American, but not from their cervixes. CMV was not recovered from the urine of 15 cervical positive women (59 cultures), the saliva of 11 (33 cultures), nor the placenta of 8. Five of 13 cervical positive women yielded CMV on post partum examination. Fourteen infants of cervical positive Chinese mothers and 11 infants of the next cervical negative mother to deliver were studied. None of the 25 yielded CMV in urine or saliva in the first week of life. Fourteen of these 25 infants first became positive between 6 weeks and 6 months of age and most remained positive on repeated cultures. Eight were born to previously positive mothers and 6 to previously negative mothers, indicating no direct association with the CMV status of the mother. Likewise, abortion or prematurity was not increased in infected mothers. Infected infants did not differ from uninfected in body measurements, growth, or apparent illness. Thus, the high prevalence of inapparent cervical CMV infection in the Chinese sample did not result in a high risk of fetal infection or infant disease, possibly because recovery of cervical CMV alone indicates a localized recurrence rather than generalized infection. (SPR)

- 41 *Investigation of 26 Childhood Cases of Acute Epidemic Poststreptococcal Glomerulonephritis.* ALFRED J. FISH*, ROGER C. HERDMAN* and ROBERT A. GOOD, Ped. Research Labs. of Variety Club Heart Hosp., Univ. of Minn., Minneapolis, Minn.

Controversy concerns immunological and ultrastructural features of acute poststreptococcal glomerulonephritis. Opportunity to study, by renal biopsy, immunohistochemistry and electron microscopy, an entire single population of patients with poststreptococcal glomerulonephritis permitted us to resolve several conflicts and to learn more of pathogenesis and natural history. An epidemic of 26 cases of acute poststreptococcal glomerulonephritis occurred among Red Lake Reservation Indian children 2 to 15 years of age. Type 49 beta hemolytic streptococci reappeared at Red Lake for the first time since the 1953 epidemic of acute glomerulonephritis. Clinical manifestations were minimal but most children had pustular streptococcal skin le-