

Fig 1. Serum concentration of sCD4 in patients with zoster and varicella. Sera from patients with zoster and varicella were assayed for sCD4 by ELISA as described in "Materials and Methods". The mean sCD4 levels were  $6.18 \pm 1.93$  ( $n = 7$ ),  $17.22 \pm 0.70$  ( $n = 26$ ), and  $16.69 \pm 1.17$  ( $n = 13$ ) U/ml in the control, zoster, and varicella groups, respectively. The  $p$  values for zoster vs. control and varicella vs. control were  $< 0.0001$  and  $0.001$ , respectively.

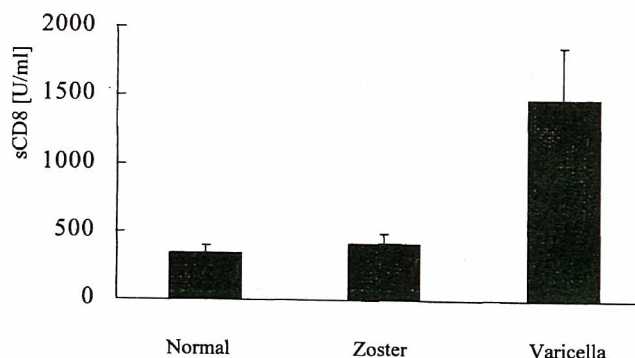


Fig 2. Serum concentration of sCD8 in patients with zoster and varicella. Sera from patients with zoster and varicella were assayed for sCD8 by ELISA as described in "Materials and Methods". The mean sCD8 levels were  $342.44 \pm 59.71$  ( $n = 9$ ),  $417.15 \pm 71.13$  ( $n = 15$ ), and  $1478.56 \pm 379.04$  ( $n = 8$ ) U/ml in the control, zoster, and varicella groups, respectively. The  $p$  values for varicella vs. control and zoster vs. varicella were  $0.018$  and  $0.013$ , respectively.

cance was determined at  $p < 0.05$ . The data are presented as the duplicate mean  $\pm$  SE.

## RESULTS

As shown in Fig. 1, the sCD4 concentration was approximately 3-fold greater in VZV patients than in normal adults, and group differences were statistically significant for the zoster ( $p < 0.0001$ ) and varicella ( $p = 0.001$ ) groups. The serum level of sCD8 (as shown in Fig. 2) was over 4-fold higher in varicella patients ( $p = 0.018$ ) when compared with control subjects; however, sCD8 did not significantly change in zoster patients. Although the preliminary data are not included here, the CD4/CD8 ratio also decreased for VZV patients (1.34 for zoster and 0.61 for varicella patients, compared to 1.8-2.2 for control subjects). Moreover, the serum concentration of sCD25 (as shown in Fig. 3) was significantly elevated in patients with both zoster ( $p = 0.045$ ) and varicella ( $p = 0.002$ ) infections. In addition, we measured VZV antibody titers for these 2 groups (Table 1). Anti-VZV IgM antibodies were found in 4 of 18 zoster patients and 8 of 10 varicella patients, but

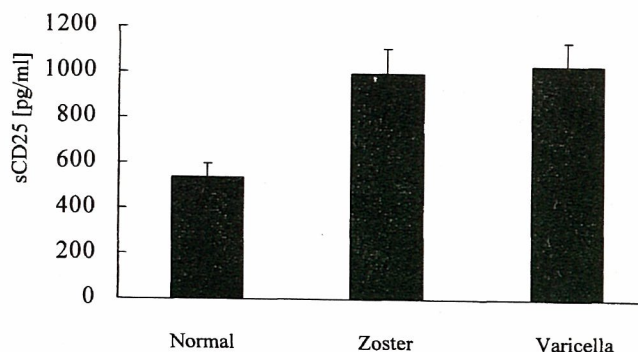


Fig 3. Serum concentrations of sCD25 in patients with zoster and varicella. Sera from patients with zoster and varicella were assayed for sCD25 by ELISA as described in "Materials and Methods". The mean sCD25 levels were  $534.67 \pm 62.10$  ( $n = 9$ ),  $996.25 \pm 110.47$  ( $n = 20$ ), and  $1032.00 \pm 103.76$  ( $n = 10$ ) pg/ml in the control, zoster and varicella groups, respectively. The  $p$  values for zoster vs. control and varicella vs. control were  $0.045$  and  $0.002$ , respectively.

none of the control subjects had these antibodies. The IgG antibody titer was significantly ( $p = 0.030$ ) elevated in zoster patients, but not in varicella patients.