SUMMARY AND CONCLUSION

SUMMARY & CONCLUSION

The present study was performed on 40 children; 19 males and 21 females, ranging in age between one and six years. They included the following groups :

1) Iron deficient group : 25 cases of iron deficiency anemia; 12 males and 13 females ranging in age between 1½ and 6 years.

2) Control group : 15 normal children; 7 males and 8 females, ranging in age between 1 2/12 and 6 years.

All children of both groups were selected free of infection, protein-calorie malnutrition or other nutritional deficiencies, and with a documented evidence of primary BCG and DPT vaccination.

Besides the routine investigations required for diagnosis and categorization of cases, all children were studied from the immunological point of view by delayed cutaneous hypersensitivity to tuberculin and tetanus toxoid antigens. This was performed as a classical means for assessment of the cell-mediated immunity.

We found that the skin reactivity of the iron deficient group to both antigens was significantly lower than that of the control group.

Conclusion :

The inflammatory response is depressed, in part, in patients with iron deficiency anemia. Accordingly, the cell-mediated immune function is probably impaired in states of iron depletion.

On the basis of our results and those of others, we suggest that adequate iron is essential for optimal expression of certain T-cell subpopulations. However, it seems that the immune function is mildly altered in "pure" iron deficiency. The presence of a profound T-cell deficiency in an iron deficient subject would therefore suggest concomitant nutritional or primary immunological defects.