protein were present in the urine following the prostatectomy, no red cells were found. This and the manner in which the urinary abnormalities cleared up during the recovery period indicate that the iodism was accompanied by a moderately severe degree of an acute renal disturbance, part of a generalized allergic reaction.

Summary

A case of iododerma, with striking facial lesions, is described. The patient was a severe asthmatic treated, *inter alia*, with potassium iodide. Hypersensitivity to the iodine resulted in skin lesions, a marked eosinophilia, tachycardia, and proteinuria.

Recovery followed the withdrawal of iodine and the administration of A.C.T.H.

The mechanism of the intoxication is discussed with particular reference to the significance of the eosinophilia. A comment is made on the so-called "E.P. syndrome" and on the effect of A.C.T.H. in the recovery of the patient.

I would like to thank Dr. A. S. Turner for permission to publish this case, and Dr. R. A. Palmer, director of the metabolic unit, Vancouver General Hospital, for his stimulating advice and criticism.

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PRE-ERYTHROCYTIC STAGES OF HUMAN MALARIA: PLASMODIUM OVALE

A PRELIMINARY NOTE

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Four species of malaria parasites are found in man—*Plasmodium vivax*, *P. falciparum*, *P. malariae*, and *P. ovale*. Pre-erythrocytic stages of *P. vivax* were demonstrated by Shortt *et al.* (1948) and of *P. falciparum* by Shortt *et al.* (1949) and Jeffery *et al.* (1952). Elucidation of this cycle in the remaining types presents two special difficulties: (1) the comparative rarity of the parasite, and (2) the poor infections usually obtainable in mosquitoes (an essential factor for success of an experiment of this kind is a large supply of heavily infected mosquitoes). Fortunately, *P. malariae*—the agent responsible for quartan malaria—has a replica in monkeys, *P. inui*, which in length of blood cycle (72 hours), length of infection in mosquitoes, and morphology closely resembles the human form; and the demonstration by Garnham (1951) of the tissue cycle of *P. inui* probably indicates the nature of the pre-erythrocytic stage of *P. malariae*. No such simian counterpart exists

in the case of *P. ovale*, and a human experiment was necessary if the problem were to be solved. A further practical difficulty to-day is the scarcity of cases of general paralysis in need of malaria therapy; practically none were available for this experiment, and, except for a short break when the infection was kept at Horton Mental Hospital, the strain had to be maintained amongst ourselves. The strain was obtained from Dr. A. R. D. Adams, who had originally isolated it from a patient from Liberia and had passed it through two patients by blood transfer before sending it to us.

The Experiment

Repeated attempts to infect mosquitoes (*Anopheles maculipennis atroparvus*) were made, but results were poor until the last trial (on J.W.), when 84% of a batch of approximately 750 became infective, with concentrations of sporozoites in the salivary glands varying from heavy to very light. These mosquitoes were allowed to feed on one of us (W.C.) on December 18, 19, and 22, 1953; many were made to bite more than once on each day by the process of interrupted feeding. Nine days after the first feed Mr. H. R. I. Wolfe excised a wedge-shaped piece of liver (about 1½ inches at the base) from the patient's left lobe.

Sections were prepared, and revealed the presence of pre-erythrocytic schizonts of *P. ovale*. A few hours after the operation the blood of the patient became flooded with ring forms of the parasite. The tissue forms were in two stages, nearly mature and completely mature schizonts. Their morphology more resembles that of the quartan parasite than of *P. vivax*, but further study of material is necessary before a definite conclusion about the affinities of this parasite can be reached.

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The Invalid Children's Aid Association's John Horniman Home at Worthing, Sussex, will admit from next April children (girls 7–16, boys 7–14) who need holidays, or care in family crises, but are so severely handicapped that they cannot be received in ordinary convalescent homes. It is hoped to provide for such cases as those with spina bifida, poliomyelitis, congenital deformities, haemophilia, muscular dystrophy, cerebral palsy (I.Q. not below 65), fragilitas ossium, and heart disease (congenital or rheumatic if quiescent). Children suffering from mental defect, epilepsy, blindness, or pulmonary tuberculosis cannot be received. The daily programme will be designed to provide the children with as many interests as possible, and will include handicrafts, painting, modelling, and probably a Guide company and Scout troop. Physiotherapy will be available. Holidays may be arranged ordinarily up to eight weeks. Accommodation will also be available for one or two nights for mothers whose presence may help a child to settle happily. Inquiries should be directed to the general secretary of the association, Miss Rattenbury, 4, Palace Gate, London, W.8.