CLAIMS TO ORIGINALITY
CLAIMS TO ORIGINALITY AND CONTRIBUTION TO KNOWLEDGE

1. An interesting finding of this investigation is the demonstration of malaria parasite in the capillary endothelial cells and their occasional presence in astrocytes (Mahdi et al., 1989a).

2. Electron microscopic studies revealed that in contrast to normal monkeys, the blood vessels of animals with cerebral malaria contained numerous macrophages.

3. This study has demonstrated a near complete occlusion of retinal blood vessels by sequestered parasitized erythrocytes. On the basis of this investigation, it has been proposed that retinal pathology may be the expression on an immunological intolerance/dysfunction (Madhi et al., 1989b).

4. a) Results of the studies carried out in P. berghei infected mouse, while confirming the parasitic infiltration in various regions of the brain, had further demonstrated sizeable decrease in total lipids, phospholipids, cholesterol and gangliosides in various regions of brain. Similarly, a remarkable increase in the rate of lipid peroxidation was observed in the cerebrum and the brain stem of the mouse brain following malarial infection (Mahdi et al., 1988c; Mahdi and Ahmad, 1989).

b) The results of the present study showed significant
alterations in hydroperoxide levels of mitochondria and microsomes of infected mouse brain specimens. Furthermore, a marked increase was shown in lipid peroxide levels in brain microsomes.

c) The experiments carried out during the course of this study have demonstrated sizeable decrease in the superoxide dismutase (SOD) activity of \textit{P. berghei} infected mouse brain.

5. On the basis of these studies the pathogenesis of cerebral malaria seems to be an outcome of a typical triad consisting of: 1) mechanical obstruction of the blood capillaries brought about by the parasitized RBCs; 2) Combination of certain biochemical events such as involvement of free radicals in particular, and 3) immunological dysfunction.

6. Immunization experiments were carried out to assess the candidate vaccine not only for its efficacy in reducing blood parasitaemia, but also for any effects it might have in increasing or decreasing the sequestration of infected erythrocytes to various organs. On the basis of these findings it is suggested that whatever may be the limitations of malaria vaccine for inhibiting malarial infection, it did provide satisfactory cover in inhibiting the involvement of brain tissue of immunized animals.
PAPERS PUBLISHED OUT OF THIS INVESTIGATION


