

MEDICINE

Rare Disease Hits Troops

Blackwater fever, a severely toxic complication of malaria which shows high mortality especially for the white race, may be hitting troops in Viet Nam—By Charles A. Betts

➤ U.S. TROOPS in Viet Nam were reported to be facing an outbreak of blackwater fever, a dangerous and little understood complication of malaria.

Blackwater fever is defined as a dangerous and little understood complication of malaria, characterized by the passage of dark red to black urine, severe toxicity and high mortality, especially for the white race.

At Walter Reed Medical Center in Washington, D.C., Col. William D. Tigertt, director of the institute of research, said he had "seen no official report" on a case of blackwater fever in Viet Nam. He added that there are, of course, "delays in transmission" between here and there.

But blackwater fever is highly suspect, because victims of a certain type malaria that will only respond to treatment by quinine are highly susceptible to the fever. Col. Tigertt confirmed that in Viet Nam, the U.S. forces had encountered a type of malaria that had to be treated with quinine.

In discussing blackwater fever, a medical officer at the Bethesda (Md.) Naval Hospital said it is a severe form of kidney infection. He concluded that "it used to be quite dangerous in the days" when the only treatment for malaria was quinine. He said that in many areas of the world, malaria

strains responding only to treatment with quinine have developed.

If the G.I. is in good enough physical condition to throw off the malaria the rest of the way by himself, the quinine may be withdrawn so there will be no risk of fever said Dr. G. Robert Coatney, National Institute of Allergy and Infectious Diseases, Bethesda, Md.

Last February, SCIENCE SERVICE reported that a synthetic drug, chloroquine, was now most widely used against malaria. However, it was pointed out, resistance has developed to chloroquine on the part of one species of the malaria parasite called *Plasmodium salcitarum*.

At that time, Dr. Geoffrey Jefferey, National Institute of Allergy and Infectious Diseases, Bethesda, told of efforts to find other synthetic drugs to replace chloroquine where it is ineffective. He said that malaria experts hope they will not have to go back to quinine as it is a poor drug compared to the newer synthetic ones. Dr. Coatney said quinine is unsatisfactory, both expensive and toxic.

"If it was a new drug," he said, "the Food and Drug Administration would never let us give it to anybody."

It has also been reported that quinine

treatment takes a minimum of five days to cure in non-resistant cases and up to 21 in resistant cases. Therefore, any extensive outbreaks of malaria strains resistant to the synthetics would require comparatively long periods of hospitalization and a resultant serious problem under combat conditions.

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PUBLIC HEALTH

New Whooping Cough Kills, Resists Vaccine

➤ A NEW TYPE of whooping cough resistant to vaccines has caused the death of four infants in Great Britain and has been reported in Canada, a doctor stated.

The failure of vaccines to immunize against the disease has created a "potentially dangerous" situation in the eyes of the British Medical Journal, July 3, 1965, which also urges "speedy modification" of present vaccines to provide protection.

The allegedly stubborn strain of whooping cough was uncovered in research by Dr. Noel W. Preston, a senior lecturer in the department of microbiology, University of Manchester.

(In Bethesda, Md., a spokesman for the division of biologics standards, National Institutes of Health, said "there is no story in this at all.")

(The NIH doctor said there is no problem with U.S. vaccines. The standard of potency of U.S. vaccines is higher than British standards, she said, and anyhow, the conclusions in the British Medical Journal must have been based on "insufficient evidence.")

Dr. Preston reported that 23 persons surveyed had become infected with the disease even though they had previously been vaccinated. Ninety-nine who had not been vaccinated were infected, as were 10 whose vaccination status was not known.

The allegedly resistant type of the disease is characterized as type 1,3 strain. Other types against which existing vaccines appear to be adequate are labeled type 1,2,3 and type 1,2.

In calling for speedy modification of vaccines, the Journal asked editorially, "Is the elimination of whooping cough feasible or must we continue to live with a small number of cases every year?"

The Journal also asked for alertness on the part of public health services to guard against further instances where disease strains break through the immunological barrier provided by vaccination.

In his report Dr. Preston emphasized that type 1,2 or type 1,2,3 strains were isolated only in unvaccinated patients. By contrast type 1,3 strains were isolated from both vaccinated and unvaccinated.

"After the introduction of pertussis (whooping cough) vaccine, there was a fairly steady decline in the incidence of whooping cough until 1962—." An upswing, however, was noted in 1964 with most of the infections being caused by the 1,3 strain.

"There is an urgent need for the modification of pertussis vaccine so that it shall contain strains in which all three antigens are adequately represented," he concluded.

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American Medical Association

ISOLATION TECHNIQUE—Dr. Roland Sonntag of the Public Service Hospital and Tulane University in New Orleans is using a manikin to show the isolation technique in hemibody chemotherapy at the annual meeting of the American Medical Association in New York. Observing the procedure is Dr. Noble S. R. Maluf (right) of Los Angeles.