

Tertian Malaria Outbreak Three Decades after its Eradication

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In the past, Bulgaria, situated in Southeastern Europe, has been heavily affected by malaria known as “thracian fever” (1). The highest incidence rate-2066% (144,632 cases)-was recorded in 1946. Conventional anti-epidemic actions have been coordinated since 1955 through the strategy of the World Health Organization (WHO). Since 1962, a diminishment of the number of the autochthonous cases has been achieved, and in 1965 the WHO announced the eradication of the local malaria (2). In the following years, cases of imported malaria by Bulgarian and foreign people from endemic countries have been recognized, e.g., nine lethal cases from malignant malaria. During the period 1965-2000, 2,850 people have been

diagnosed as having imported malaria caused mainly by *Plasmodium vivax* and *P. falciparum* and at a lesser frequency by *P. ovale* and *P. malariae* (3,4).

For the first time after the malaria eradication in 1995-1996, some cases have been found in southeast Bulgaria, near the border with Greece and Macedonia-18 local cases of tertian malaria of *P. vivax*. In August 1995, eight cases of malaria were found, and three cases more in September. The sick people range in the age from 5-60 years, and are residents of four rural areas in the neighborhood of the town of Sandanski, situated in the valley of the Struma river. The climate of this region is strongly influenced by the Mediterranean Sea, and has been highly hyperendemic in the past, with the malaria and its vector, *Anopheles maculipennis* seasons lasting from April to October. Most probably the origin of the parasite

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carrier of *P. vivax* comes from an African immigrant that has been in this area in June-July 1995 on his way to Greece.

All these malaria patients have been isolated and treated in hospital with chloroquine and for antirelapse with primaquine. An insecticide treatment was carried out in the villages. In 1996, from May to August, seven cases of tertian malaria have been found in adults. Of them, five live in two of these epidemic villages and have been diagnosed as having tertian malaria with prolonged incubation period. The other two people who fell ill in August were in the area only temporarily and were suspected of having the disease due to transmission of the local cases in the previous months. All of the 18 people that were infected in 1995 and 1996 from local malaria have been recognized and have been tested at least once a year for 3 years for malaria. Relapses have not been found. Antiepidemic measures and control over the outbreak of tertian malaria have been carried out by the local medical unit, in cooperation with the Department of Parasitology and Tropical Medicine at the National Center of Infectious and Parasitic Diseases.

Recently the WHO has given special attention to the increase of the number of malaria cases worldwide (5). The briefly

announced outbreak showed a real risk of the roll-back of malaria being imported into countries where it has already been eradicated. This is especially true of tertian malaria, caused by *P. vivax* that is more adaptive to anopheline populations.

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