

ART as a method for early rapid diagnosis of tropical malaria

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Malaria, also known as swamp fever and paroxysmal malaria, is an acute infectious disease caused by several species of the protozoa of the genus Plasmodium and transmitted by the bite of an Anopheles mosquito. Recently, an increasing number of Russian citizens have been bringing tropical malaria from exotic countries. The life cycle of a plasmodium is carried out with a change of 2 hosts: the final one is a female mosquito, where sexual development takes place (sporogony) and an intermediate one, in whose body asexual development of plasmodium (schizogony) occurs. When a mosquito bites, sporozoites are carried with blood and lymph into hepatocytes - the stage of tissue schizont. This period lasts about a week. The resulting merozoites enter the bloodstream and infect erythrocytes - the stage of erythrocytic schizogony, which lasts 48 hours. Here, the maturation of sexually mature forms takes place within 8-12 days, which remain in the peripheral blood for up to two months. At the first stage of tissue schizogony, there are no clinical manifestations, and complaints intensively appear only after a week and are caused by the release of a huge number of merozoites from the liver into the blood. That is why very often the symptoms of malaria are mistaken for elementary acute respiratory viral infections and do not attach importance, while losing precious time. Death in tropical malaria with complications - 96 hours. Until now, the main method for diagnosing malaria has been microscopic examination of blood preparations stained according to Romanovsky-Giemsa. However, it has limitations due to its low sensitivity in submicroscopic parasitemia. The earliest possible and express diagnostics is required, which persist in the peripheral blood for up to two months. At the first stage of tissue schizogony, there are no clinical manifestations, and complaints intensively appear only after a week and are caused by the release of a huge number of merozoites from the liver into the blood. That is why very often the symptoms of malaria are mistaken for elementary acute respiratory viral infections and do not attach importance, while losing precious time. Death in tropical malaria with complications - 96 hours. Until now, the main method for diagnosing malaria has been microscopic examination of blood preparations stained according to Romanovsky-Giemsa. However, it has limitations due to its low sensitivity in submicroscopic parasitemia. The earliest possible and express diagnostics is required, which persist in the peripheral blood for up to two months. At the first stage of tissue schizogony, there are no clinical manifestations, and complaints intensively appear only after a week and are caused by the release of a huge number of merozoites from the liver into the blood. That is why very often the symptoms of malaria are mistaken for elementary acute respiratory viral infections and do not attach importance, while losing precious time. Death in tropical malaria with complications - 96 hours. Until now, the main method for diagnosing malaria has been microscopic examination of blood preparations stained according to Romanovsky-Giemsa. However, it has limitations due to its low sensitivity in submicroscopic parasitemia. The earliest possible and express diagnostics is required, and complaints intensively appear only after a week and are caused by the release of a huge number of merozoites from the liver into the blood. That is why very often the symptoms of malaria are mistaken for elementary acute respiratory viral infections and do not attach importance, while losing precious time. Death in tropical malaria with complications - 96 hours. Until now, the main method for diagnosing malaria has been microscopic examination of blood preparations stained according to Romanovsky-Giemsa. However, it has limitations due to its low sensitivity in submicroscopic parasitemia. The earliest possible and express diagnostics is required, and complaints intensively appear only after a week and are caused by the release of a huge number of merozoites from the liver into the blood. That is why very often the symptoms of malaria are mistaken for elementary acute respiratory viral infections and do not attach importance, while losing precious time. Death in tropical malaria with complications - 96 hours.

ART is an ideal method for this, as it allows you to identify, differentiate and select therapy before the development of malarial coma. Malaria is characterized by a period of acute attacks of fever (primary attack) followed by a febrile period. After an incubation period of varying duration (from 1 to 6 weeks, depending on the type of pathogen), non-immune patients may experience a prodromal period, characterized by chills, headache, low-grade fever, malaise, myalgia, and sometimes diarrhea (in tropical malaria)

Example

Patient N., after returning from a business trip on the 3rd day, felt an unremitting chill, the temperature rose to 40 during the day. C and decreased to 37.7 With, there was a strong weakness, upset stool. The nature of the temperature curve suggested malaria. In ART, the nosode Malaria D5-400 and Tropical malaria D5-12 were identified. Intoxication syndrome was growing, neurological symptoms joined in the form of hallucinations, alternation of excitability and stupor. On the first day, the patient was immediately prescribed mefloquine (a chemotherapy drug), Tibetan herbal teas, a BR-drug was created, and exogenous BRT (F199) was performed. Infusion detoxification therapy was carried out. On the second day the temperature

rose to 39 °C, the rest of the symptoms persisted. The patient noted an improvement in his condition during exogenous BRT (F199). A blood test for malaria, carried out in the classical way, did not reveal the causative agent of malaria (the analysis was ready on the 3rd day of the disease, when the therapy was already carried out using the traditional method). It was possible to doubt the correctness of the diagnosis, but the correct key diagnostic criterion for malaria was an improvement in the condition immediately after taking the chemotherapy (course - 3 tablets at once, then after 8 hours - 2, after another 8 - 1 tablet). On the 4th day, the temperature rose to 38 °C. Neurological symptoms disappeared, but there was severe weakness, heaviness in the right hypochondrium and pain in the region of the heart. In a biochemical blood test: alt - 0.75 mmol / l, ast - 0.45 mmol / l; COE - 18 mm / h. On the 7th day, the patient became much better. Such a favorable course of malaria is associated with early diagnosis by ART and classical conventional treatment.

Considering the possibility of death in tropical malaria and the rapid transition from a benign to malignant course, the absence of an urgent and reliable laboratory study, the authors of this article consider it appropriate to use ART and BRT for diagnosis and treatment of this infection.

After suffering a tropical short-term malaria, an unstable immunity is formed, so travel and post-infectious epidemically unfavorable areas are fraught with re-infection. In addition to chemotherapy, we believe that prophylaxis can be an "electronic" vaccination created with the help of ART, and mandatory testing after return, since this method has shown itself to be effective in early diagnosis.

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