

医薬品 研究報告 調査報告書

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販売名(企業名)	解凍赤血球濃厚液「日赤」(日本赤十字社) 照射解凍赤血球濃厚液「日赤」(日本赤十字社)					
研究報告の概要	○マラリアーバハマ、グレートエグズーマ島、2006年5月～6月 カリブ地域においてマラリアはヒスパニオラ島(ハイチ及びドミニカ共和国)を除くすべての島で根絶されていた。しかしながら、マラリアが蔓延していないにもかかわらず、カリブ海の島々は、熱帯性の気候、媒介動物の存在、近接するマラリア汚染国などによりマラリア再侵入の危機にさらされてきた。この懸念は最近のバハマ、グレートエグズーマ島におけるマラリアの流行によって裏付けられた。2006年5月～6月の間に合計19例のマラリア症例が確認された。このうち4例は北米及び欧州からの渡航者のものである。このような輸入症例は、渡航先の国におけるマラリアの問題の存在を明らかにし、現地保健当局の調査の一助となる。3ヶ月間新規症例の報告がなかったため、2006年9月19日、CDCは米国在住の渡航者向けの抗マラリア薬服用勧告を解除した。					使用上の注意記載状況・ その他参考事項等 解凍赤血球濃厚液「日赤」 照射解凍赤血球濃厚液「日赤」 血液を介するウイルス、 細菌、原虫等の感染 vCJD等の伝播のリスク
	報告企業の意見	今後の対応				
2006年9月19日、CDCは米国在住のグレートエグズーマ島渡航者向けの抗マラリア薬服用勧告を解除したとの報告である。			日本赤十字社は、8月1日以降、バハマに滞在した場合は帰国(入国)から1年間献血延期としている(帰国(入国)後にマラリアを思わせる症状があった場合は、マラリア感染が否定されるまで)。また、今後も引き続き、マラリア感染に関する新たな知見及び情報の収集に努める。			





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Malaria --- Great Exuma, Bahamas, May--June 2006

Malaria in humans is caused by four distinct protozoan species of the genus *Plasmodium* (*P. falciparum*, *P. vivax*, *P. ovale*, and *P. malariae*). These parasites are transmitted by the bite of an infective female *Anopheles* mosquito (1). In the Caribbean region, malaria has been eliminated from all islands except Hispaniola, the island consisting of Haiti and the Dominican Republic. Elimination of malaria elsewhere resulted from a combination of integrated control measures, socioeconomic development, and close public health surveillance. However, even Caribbean islands where malaria is no longer endemic remain at constant risk for reintroduction of the disease because of their tropical climate, presence of competent malaria vectors, and proximity to other countries where malaria is endemic. This susceptibility was underscored by the recent outbreak of malaria on the island of Great Exuma in the Bahamas; during May–June 2006, a total of 19 malaria cases were identified. Four of the cases, in travelers from North America and Europe, are described in this report; such cases of imported malaria can signal the presence of a malaria problem in the country visited and thus assist local health authorities in their investigations. On September 19, after 3 months with no report of new cases, CDC rescinded its previous recommendation that U.S.-based travelers take preventive doses of the antimalarial drug chloroquine before, during, and after travel to Great Exuma.*

Case 1. On May 24, 2006, a man aged 33 years from the United States received a diagnosis of malaria in a hospital emergency department in Virginia. The patient had intermittent fever, sweats, abdominal discomfort, nausea, and vomiting, which had begun during a May 4–7 visit to Great Exuma, where the patient had stayed in a resort hotel. The patient had no history of exposure to malaria. Blood smears on May 24 indicated *P. falciparum*. After outpatient treatment with chloroquine, changed later to quinine and doxycycline, the patient recovered uneventfully.

Case 2. On June 6, a woman aged 29 years from Germany received a diagnosis of *P. falciparum* malaria in a hospital in Germany. She had experienced fever, headache, nausea, and vomiting since May 30, near the end of a 18–31 day visit to Great Exuma. After her return to Germany, the woman was treated initially with antibiotics for suspected sinusitis. However, her illness persisted, and she was hospitalized on June 6 with high fever and neck stiffness. Diagnostic tests included magnetic resonance imaging of her head, a lumbar puncture to exclude meningitis, and a blood smear that revealed *P. falciparum*. She was treated with artemether-lumefantrine and recovered.

Case 3. On June 16, a man aged 20 years from Canada had *P. falciparum* malaria diagnosed. The man had been born in the Bahamas and had visited friends and relatives there during April 19–June 11, spending most of his time in Georgetown, the most populous city on Great Exuma. On June 14, the man experienced fever and chills and went to an emergency department for evaluation after learning that his cousin had been treated recently for malaria on Great Exuma. The diagnosis of *P. falciparum* malaria was confirmed by blood smear on June 16. He was treated on an outpatient basis with chloroquine followed by atovaquone-proguanil and recovered uneventfully.

Case 4. A man aged 66 years from the United States, who lived on a boat, received a diagnosis of *P. falciparum* malaria on June 19. The man, who had not recently visited any area that was endemic for malaria, stayed in Great Exuma from late April to late May. In early May, he began experiencing fever, chills, sweats, headaches, and fatigue but did not seek medical care; he left Great Exuma to sail to other Bahamian islands. On June 18, on his return to Great Exuma, the patient learned of the outbreak and went the next day to the district medical clinic, where he received a diagnosis of *P. falciparum* malaria. He was treated with chloroquine and primaquine and recovered uneventfully.

After report of the first case in Virginia, the Bahamian Ministry of Health (MOH) initiated epidemiologic and entomologic investigations with the technical assistance of the Pan American Health Organization. MOH also heightened mosquito-control activities that were already being conducted on Great Exuma in conjunction with the Bahamian Department of Environmental Health Services.

Active case detection was conducted on Great Exuma during June 6--30; however, no case of malaria was diagnosed later than the June 19 diagnosis in case 4. Persons examined at primary-care clinics who had a history of fever and a temperature of $\geq 99.0^{\circ}\text{F}$ ($\geq 37.2^{\circ}\text{C}$) and contacts of persons who received diagnoses of malaria were screened using thick and thin blood smears stained with Wright's stain. On Great Exuma, 15 persons were determined infected with *P. falciparum*. Ages ranged from 16 to 66 years (median: 36 years); 84% were males. Most of these patients were residents of the Bahamas, clustered around the areas of Georgetown and Bahama Sound, and living in close proximity to a community of immigrants from Haiti; most said they had not recently traveled to Haiti or any other area endemic for malaria. All patients were initially treated with chloroquine and pyrimethamine; the latter was subsequently replaced by primaquine to eliminate gametocytes and thus prevent further transmission. All 15 patients recovered.

A parasite prevalence survey was conducted on Great Exuma in a community of immigrants from Haiti, from which anecdotal reports of illness had been received. Of 159 persons who consented to testing, 29 adults were determined infected with *P. falciparum*. This finding prompted mass treatment with chloroquine and primaquine of 203 persons within that community.

Entomologic surveys were conducted in multiple sites near bodies of fresh water identified by ground and air surveys in Great Exuma. Human bait and CDC light-trap collections yielded large populations of mosquitoes, of which only five were adult *Anopheles albimanus*. Surveys of potential breeding sites indicated few areas favorable for breeding of *An. albimanus* larvae, with five confirmed *An. albimanus* larvae collected from three breeding sites. Mosquito-control interventions were intensified beginning May 30. These measures included spraying 1) at potential breeding sites, 2) within a quarter-mile radius of patients with confirmed cases, and 3) within a half-mile radius of patients detected through contact tracing, initially with a water-based pyrethroid insecticide, and later with malathion 96.5%. In addition, all bodies of fresh water on Great Exuma, neighboring Little Exuma, and surrounding cays (reefs) were treated with temephos to eliminate larvae.

As of September 19, no additional cases of malaria had been identified on Great Exuma or any other island in the Bahamas, despite intense epidemiologic surveillance. Mosquito-control measures were being continued throughout the Bahamas.

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Literature Note:

The Bahamas is an archipelagic nation in the northern Caribbean Sea, consisting of approximately 700 islands and 100 cays stretching between Florida and Haiti (Figure). Persons from Hispaniola and other countries have migrated to the Bahamas, where malaria is not endemic and only one imported case was reported in 2005. However, because of frequent travel and relocation among countries, health-care providers in the Bahamas and other countries where malaria is not endemic should remain alert to the risk for this disease, especially in travelers and immigrants. Introduced malaria is much less common than imported malaria but of greater epidemiologic significance. Imported malaria usually occurs when travelers acquire the infection while visiting areas where malaria is endemic. Introduced malaria typically occurs when infected travelers return home and transmit the infection to local *Anopheles* mosquitoes, which subsequently transmit it to local residents. Left unchecked, this process can result in reestablishment of endemic malaria in countries that have previously eliminated the disease because these areas have climatic conditions favorable to transmission and *Anopheles* species that are receptive to malaria parasites. In the United States, 1,320 cases of imported malaria were reported in 2004 (1), and 63 episodes of introduced malaria were detected from 1957 to 2003, the year when the latest episode occurred in Florida (2--

4).

Available evidence indicates that during May–June 2006, Great Exuma experienced an outbreak of introduced malaria that was successfully contained and terminated. The observations that all cases were caused by *P. falciparum* and a substantial proportion of patients were immigrants from Haiti suggest that malaria was introduced by those immigrants. All patients treated with chloroquine responded to the treatment, which is a further suggestion that the parasites originated from Haiti, where *P. falciparum* has remained sensitive to chloroquine. *P. falciparum* causes 99% of malaria cases in Haiti and the Dominican Republic (MD Milord, Ministry of Public Health and Population, Haiti, and JM Puello, National Center for Control of Tropical Diseases, Dominican Republic, personal communication, 2006), which share the only Caribbean island still endemic for malaria. Conversely, *P. vivax* causes 94% of cases in Mexico and Central America (5).

The successful containment of this malaria outbreak is attributable to several factors. The first identified case, detected in a foreign tourist returning from the Bahamas, was promptly reported to the Bahamian MOH, which responded with several complementary interventions, including identification and treatment of patients and asymptomatic parasite carriers and institution of mosquito-control measures. Fewer than 30 days elapsed between diagnosis of the first identified case in Virginia and diagnosis of the last case on Great Exuma. Since June 19, no additional cases have been noted, despite intensive ongoing surveillance among febrile patients.

In view of these findings, CDC has rescinded recommendations made on June 16, 2006, that travelers take preventive doses of chloroquine before, during, and after travel to Great Exuma. As of September 19, CDC no longer recommends that travelers to Great Exuma take antimalarial prophylaxis.

This malaria outbreak illustrates the importance of vigilance by health-care providers and rapid response by public health authorities for successful containment (2) and also might provide incentive for measures to eliminate malaria from all Caribbean islands, including Hispaniola. Recently, the International Task Force for Disease Eradication recommended that Haiti and the Dominican Republic work jointly to eliminate from Hispaniola both malaria and lymphatic filariasis, two vectorborne parasitic diseases that have been eliminated from all other Caribbean islands (6). Agreements reached in July 2006 between the ministries of health of Haiti and the Dominican Republic represent a first step toward achieving this goal.

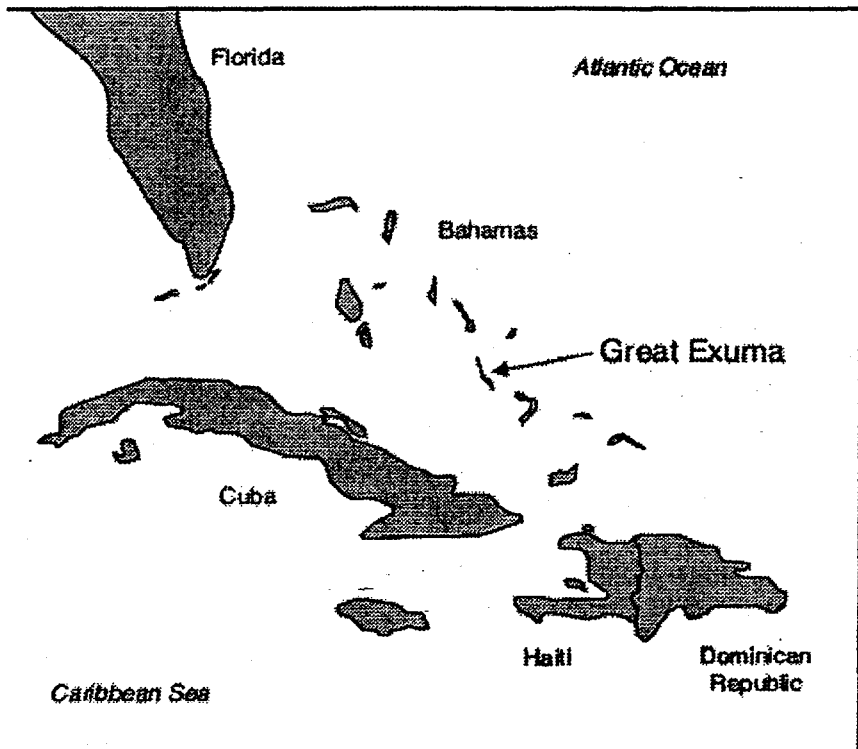
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* Available at http://www.cdc.gov/travel/other/2006/malaria_bahamas.htm.

Figure

FIGURE. Nineteen cases of malaria, including four among travelers, were reported as acquired on the island of Great Exuma in the Bahamas during May–June 2006



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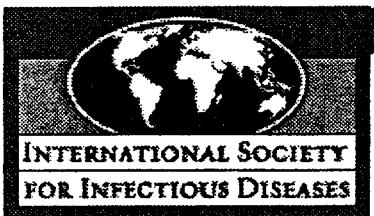
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研究報告の概要	<p>○中国東部でマラリアが拡大 中国東部の安徽省でマラリア感染が拡大している。地元の保健当局によると、今年に入ってから2006年9月25日時点で17917例が報告されており、昨年の同時期と比較すると89.8%増加している。報告が多いのは、亳州、淮北、蘇州、蚌埠、富陽である。当局によると、2000年からマラリア感染が増え始めている。保健当局は緊急通告を出して、感染の監視を強化し、拡大防止のためにマラリア予防と治療に関する啓発を行うよう地元自治体に要請した。マラリアの予防と抑止の視察を10月の最初の20日間に行うと通告では伝えている。感染拡大を招くことになった監督の甘い担当者には厳しい処分が行われるだろうとのことである。保健省によると、中国全土では2005年に39656例のマラリア症例が発生し、うち45名が死亡している。</p>					<p>人全血液CPD「日赤」 照射人全血液CPD「日赤」 人全血液-LR「日赤」 照射人全血液-LR「日赤」</p> <p>血液を介するウイルス、 細菌、原虫等の感染 vCJD等の伝播のリスク</p>
	報告企業の意見	今後の対応				
中国東部の安徽省でマラリア感染が拡大しているとの報告である。			日本赤十字社では、輸血感染症対策として問診時に海外渡航歴の有無を確認し、帰国後4週間は献血不適としている。また、安徽省をはじめとする中国南部をマラリア流行地(B地域)として、旅行者または居住経験者の供血を一定期間延期している(1~3年の延期を行うとともに、帰国後マラリアを思わせる症状があった場合は、感染が否定されるまでの間についても献血を見合わせる)。今後も引き続き、マラリア感染に関する新たな知見及び情報の収集、対応に努める。			

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Malaria spreads in east China province

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Malaria is spreading in east China's Anhui Province, which reported 17 917 cases by 25 Sep 2006 (this year), according to the provincial health department. The malaria cases increased by 89.8 percent from the same period last year, said the department. The cases were mainly reported in Bozhou, Huaibei, Suzhou, Bengbu and Fuyang in the north of the province.

Malaria cases have been on the rise since 2000 in these areas, according to the department. The department has issued an emergency notice asking local government authorities to strengthen the monitoring of the epidemic and promote the prevention and treatment knowledge among people to curb its spread

A check on malaria prevention and control in the disease-hit areas will be carried out in the 1st 20 days of this month [October 2006], said the notice. Those officials whose lax supervision caused a spread of the disease will be severely punished, according to the department. China reported 39 656 malaria cases in 2005, 45 of whom died, according to the Ministry of Health.

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[Anhui province is regarded as a low risk area for malaria in China. We presume that all cases are *Plasmodium vivax*. It is a cause for concern that malaria is returning to an area previously regarded as very low risk. The CDC does not recommend malaria prophylaxis to visitors to Anhui Province <<http://www.cdc.gov/travel/regionalmalaria/eastasia.htm#malariarisk>>, and more information is needed before recommendations to travelers might be changed.

A map of malaria in China for 2001 can be found at
<<http://www.actmalaria.org/downloads/pdf/info/2004/China.pdf#search=%22Malaria%20%2BChina%22>>;

it shows Anhui Province as having 0 to less than 1 case per 100 000 inhabitants. ProMED will be happy to publish newer data if available. - Mod.EP

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