

# New malaria 'poses human threat'

---

**An emerging new form of malaria poses a deadly threat to humans, research has shown.**

It had been thought the parasite Plasmodium knowlesi infected only monkeys.

Page last updated at 12:45 GMT, Wednesday, 9 September 2009 13:45 UK

But it has recently been found to be widespread in humans in Malaysia, and the latest study confirms that it can kill if not treated quickly.

The work, by an international team, appears in the journal Clinical Infectious Diseases.

**" The increase in tourism in Southeast Asia may mean that more cases are detected in the future, including in Western countries "**

Professor Balbir Singh University Malaysia Sarawak

Although the new form of the disease has so far been concentrated in South East Asia, the researchers warn that tourism to the region could soon see cases appearing in Western countries too.

Malaria kills more than a million people each year.

It is caused by malaria parasites, which are injected into the bloodstream by infected mosquitoes.

Of the four species of malaria parasite that often cause disease in humans, *P. falciparum*, found most commonly in Africa, is the most deadly.

Another parasite, *P. malariae*, found in tropical and sub-tropical regions across the globe, has symptoms that are usually less serious.

*P. knowlesi* had been thought only to infect monkeys, in particular long-tailed and pig-tailed macaques found in the rainforests of South East Asia.

But following work by a team at the University Malaysia Sarawak it has now been recognised as a significant cause of disease in humans.

The latest study shows that *P. knowlesi* can easily be confused with *P. malariae* under the microscope.

## **Speedy reproduction**

However, unlike its cousin, *P. knowlesi* has the ability to reproduce every 24 hours in the blood - meaning infection is potentially deadly.

Researcher Professor Balbir Singh said this meant early diagnosis and treatment were crucial.

The researchers carried out tests on over 150 patients admitted to hospital in Sarawak, Malaysian Borneo, between July 2006 and January 2008 with malaria infection.

They found that *P. knowlesi* accounted for more than two-thirds of the infections, resulting in a wide spectrum of disease.

Most cases of infection were uncomplicated and easily treated with drugs, including chloroquine and primaquine.

However, around one in ten patients had developed complications, such as breathing difficulties and kidney problems, and two died.

Although the fatality rate was just under 2%, that made *P. knowlesi* as deadly as *P. falciparum* malaria.

And the researchers stress it is hard to determine an accurate fatality rate given the small number of cases so far studied.

## **Low platelet count**

All of the *P. knowlesi* patients had a low blood platelet count, significantly lower than that usually found for other types of malaria.

However, even though blood platelets are essential for blood clotting, no cases of excessive bleeding or problems with clotting were identified.

The researchers believe the low blood platelet count could be used as a potential way to diagnose *P. knowlesi* infections.

Professor Singh said: "The increase in tourism in South East Asia may mean that more cases are detected in the future, including in Western

countries.

"Clinicians assessing a patient who has visited an area with known or possible *P. knowlesi* transmission should be aware of the diagnosis, clinical manifestations, and rapid and potentially serious course of *P. knowlesi* malaria."

<http://news.bbc.co.uk/2/hi/health/8246063.stm>