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Five cases of HIV with HMS—but where are the rest?

Spanish physicians have reported five cases of hyper-reactive malarial splenomegaly (HMS) with concomitant HIV infection—an extraordinarily rare combination if the almost complete absence of similar published reports is to be believed.

“Concurrent HIV/HMS is virtually unreported”, explains Sabino Puente (Hospital Carlos III, Madrid, Spain), who presented the cases at the 8th Conference of the International Society of Travel Medicine (New York, May 7–11). “But this problem surely cannot be as rare as this. In Africa, with HIV and malaria endemic in the same areas, there have to be many more cases. HMS is sometimes very common in the tropics; in Papua New Guinea there are places where up to 75% of the population is affected. Co-occurrence with HIV seems not to have been properly studied.”

The five patients (four men, one woman, all aged 33–56) treated by Puente in Madrid were all

immigrants or visitors from Equatorial Guinea. All were confirmed HIV patients and all were receiving antiretroviral treatment.

Medical tattooing for splenomegaly

HMS was diagnosed using Fakunle's major diagnostic criteria: gross splenomegaly, high antibody titres for malarial antibodies, a high serum IgM count, and clinical and immunological response to anti-malarial drugs.

Further, PCR and microscopy of blood smears confirmed two patients with *Plasmodium malariae* and one with *Plasmodium falciparum* infection—it is common not to find

parasites in the blood of these patients. Splenomegaly can be caused by infections other than malaria—eg, by leishmaniasis, “but there is no leishmaniasis in this part of the world”, explains Puente.

The only similar report has been that of an Ethiopian immigrant to Israel who was diagnosed with HIV/HMS (effectively treated with proguanil) and severe pneumonia. Together, these patients represent opposite sides of Africa, suggesting the condition may be geographically widespread.

José Antonio Nájera (ex-director, Division of Tropical Diseases, WHO) commented, “It is logical to agree that concurrent HIV/HMS should be more frequent than reported. Nevertheless, the focal HMS distribution, isolated foci of very high prevalence, and a constellation of determinant factors, may not coincide with HIV distribution. Is it possible that AIDS immuno-deficiency prevents HMS?”

Adrian Burton

Wild animals could be source of SARS

The search for an animal reservoir of the virus that causes severe acute respiratory syndrome (SARS) has turned to wild mammals after the isolation of a virus “almost identical” to SARS-associated coronavirus (SCV) from six masked palm civets (*Paguma larvata*) and one raccoon dog (*Nyctereutes procyonoides*) in a market in Shenzhen, southern China, in May. The research team, led by Guan Yi (University of Hong Kong), also detected antibody to SCV in a Chinese ferret badger (*Melogale moschata*) in the market. All three species are sold as delicacies for human consumption throughout southern China.

“The homology between SCV and the animal virus is extremely high at 99%”, says Guan. “The major difference is a 29 nucleotide deletion in SCV, which suggests transmission from animals to humans rather than a

human virus that has jumped to animals. There are also consistent differences in the surface protein gene”.

“The study provides the first indication that the SARS virus exists outside a human host”, says team member Malik Peiris (Hong Kong University). All six civets in the market harboured the virus, which Peiris suggests points to recent infection. “It is possible that they got infected from the primary animal reservoir and are not themselves the true reservoir in nature.”

Trevor Drew (Veterinary Laboratories Agency, Weybridge, UK) thinks it is too early to say whether any of the species studied is the natural host of the virus. “It is quite possible that civets represent another susceptible species, infected by a virus very similar to SCV, rather than a reservoir of this virus and of the SARS virus.”

Any lingering doubts about the cause of SARS have been swept away with the demonstration that SCV meets all six of Koch's postulates for viral diseases. Three criteria—isolation of virus from diseased hosts, cultivation of the virus in host cells, and proof of filterability—had already been met. Albert Osterhaus (Erasmus Medical Centre, Rotterdam, Netherlands) and colleagues have now proved the last three by successfully infecting macaques (*Macaca fascicularis*) with SCV, reisolating the virus from diseased animals, and showing that the monkeys had mounted an immune response against SCV (*Nature* 2003; **423**: 240). The authors say their findings do not exclude the possibility that other pathogens, such as human metapneumovirus and *Chlamydia pneumoniae*, may have exacerbated the illness in some SARS patients.

Dorothy Bonn