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Recrudescence of yellow fever in Chad: Case report of the last confirmed case on April 2020 in the health district of Lai-Chad

Oumaima Mahamat Djarma

Ministry of Public Health and National Solidarity, N'Djamena, Chad

Introduction: Yellow fever (YF) is a viral haemorrhagic fever, caused by the amaril virus, transmitted by mosquitoes of the genus *Aedes*. In Chad, in 2013 two cases of yellow fever were identified and confirmed under the national yellow fever surveillance programme during an outbreak of the disease in the Darfur border region of Sudan. Since then the country has recorded 4 confirmed cases, including one this year.

Clinical case: Mr K.M, 57 years old, without medical or surgical history and his vaccination status is unknown. He was consulted on 21 April 2020 with fever, jaundice, epistaxis of medium to low severity on 14 and 17 April 2020 and painful hepatomegaly. In the month before the onset of his illness, according to the family, he had not made any trips outside the city of Lai. His last trip was in November 2019.

The clinical examination during his hospitalisation at Bebaloum hospital revealed conjunctival jaundice, a painful hepatomegaly with a hepatic arrow of 22 cm.

In view of these signs, a notification of febrile jaundice was made to the system and the sample taken that same day revealed the amaril virus post mortem by RT-PCR; the search for trophozooids and hepatitis, particularly B & C, was also negative. The search for other arboviroses was not carried out. The blood count showed a hyperleukocytosis of 27.103/mm³ with a predominance of neutrophils of 18.103/mm³. Blood cultures were not taken.

During his hospitalisation he had received medical treatment with amoxicillin 3g/24h, Metronidazole 1.5g/24h and rehydration 3l/24h. The active search for cases of febrile jaundice in the community was carried out during the immunisation coverage survey and consisted of searching the households visited for subjects presenting with fever and jaundice and/or accompanied by bleeding. Five suspected cases were detected and sampled. The clinical evolution was marked by persistent bleeding and a disturbance of consciousness with a SOFA Q score of 3. It is in this context that death occurred after 5 days of hospitalisation.

Conclusion: This confirmed case of yellow fever is not an isolated case in Chad. Thus, the confirmation of yellow fever in this district, the low level of vaccination coverage, the reality of the virus' circulation and the presence of the vector in the country should alert us to a real threat of yellow fever re-emerging in Chad. The immediate recommendations focused on mass vaccination of the province's population and strengthening the active epidemiological surveillance system throughout the country.

Biography

I am a specialist in infectious and tropical diseases and am currently studying for a Master's degree in epidemiology and biostatistics. I am an attending physician and university assistant at the Good Samaritan Hospital N'djamena-Chad and attached to the department of Disease Control and Health Promotion at the Ministry of Public Health and National Solidarity of Chad. I am particularly interested in emerging and re-emerging pathologies, where I carry out missions of investigation and medical management of cases:

- COVID-19 in Chad;
- Yellow fever in southern Chad;
- Chikungunya in Eastern Chad
- Influenza A H1N1/2009 in Eastern Chad.

I am a member of several learned societies (IAS, SAPI, scientific committee of Chad).

oumidj@yahoo.fr