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Uses of error

Diagnosis of viral disease

Pedro F C Vasconcelos

When the 1997 dengue epidemic occurred in Belém, Brazil, I saw several patients with fever and other common symptoms of dengue including skin rash. I recall one patient, who was the daughter of a colleague with the same clinical symptoms as the others. After the physical examination, I concluded that she also had dengue fever. I only requested blood tests to confirm the case as dengue, at the request of the relatives. To my surprise, the serology, including a convalescent sample, and the attempts at viral isolation were negative. Due to my diagnosis, and pressure from her family, she had been discharged without further tests. Subsequently, I was obliged to request them and they showed an exuberant serological conversion for cytomegalovirus. During a rubella epidemic that happened in a small city near Belém several years ago, a doctor telephoned to our laboratory to tell us the occurrence of several cases in the city. The picture was typical with fever, skin rash, arthralgia, and lymphadenopathy. The colleague

was worried because several patients had also developed jaundice and hemorrhages, and had died. The colleague was puzzled because he didn't know that fatal cases of rubella occurred or were accompanied by jaundice and haemorrhages. When the samples were examined in our laboratory, it was observed that the cases diagnosed as rubella were in fact caused by Mayaro virus, an Alphavirus related to chikungunya and Semliki Forest viruses, and that the cases presenting with jaundice and haemorrhage were in fact yellow fever. This was one of the first simultaneous epidemics of these two viruses in the Brazilian Amazon region, both transmitted by mosquitoes in the forest. Since then, I adopted a more conservative position for the clinical diagnosis of diseases presenting with fever and skin rash. The most prudent course is to request examinations for the viruses most prevalent in the area and wait for the laboratory results. Some results can be unexpected.

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