

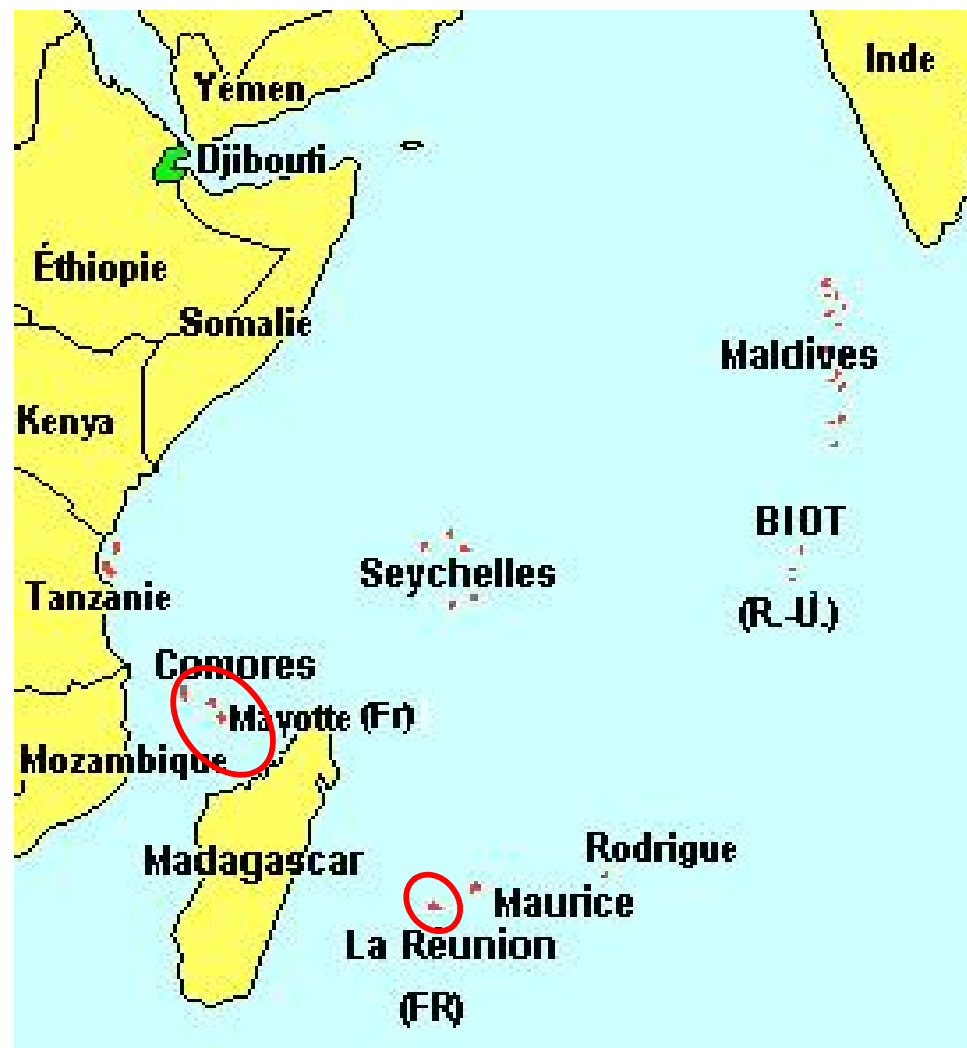
Emerging Chikungunya in Reunion Island 2005-2006

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Réunion Island



- French territory (part of EU)
- Population 770,000
- Health services comparable to mainland France



The disease

- Chikungunya : « that what bends up » in Bantou
- Arbovirus, Togaviridae family, *Alphavirus*
- First identification en 1952 in Tanzania
- Circulates in Asia and Africa
- Transmitted by *Aedes* mosquitoes (*albopictus*, *aegypti*, *polynesiensis*...)
- Diagnosis: serology, PCR, viral culture



Clinical presentation

- Sudden onset: fever and joint pain
- Self-limiting disease with favorable outcome in most cases
- Persistent joint pain in 10-30% patients
- Symptomatic treatment only
- Individual and collective prevention (vector control)



The alert

- March 16, 2005: information about an outbreak in the Comoros (WHO)
- April 29, 2005: notification of the first confirmed case in Réunion Island
- May 2005: 3 first autochthonous cases on Réunion Island

Surveillance system

April 2005 - December 2005

- Case reports: GP sentinel network.
- Active and retrospective case-finding: vector control team
- Medical laboratories, private practitioners, patients

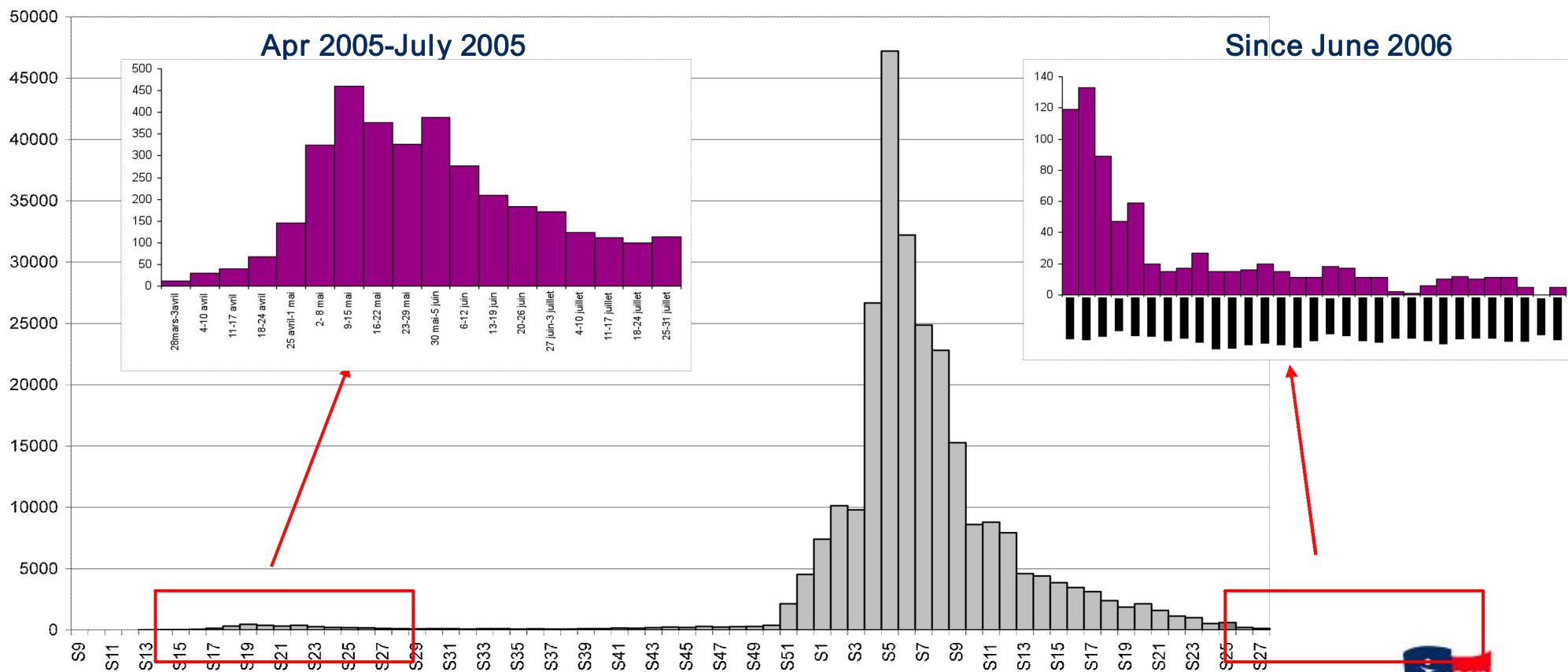
Surveillance system

December 2005 – June 2006

- December 19, 2005
 - Epidemic suddenly more important (EW 50 < 400 cases VS EW 51 > 2,000 cases)
 - Number of cases exceeds the capacity of the surveillance system
- Sentinel network: 31 GP
 - Extrapolation of the total number of cases from the sentinel network data
 - ➔ 1 case reported = 67 symptomatic Chikungunya cases
- Mortality and hospital based surveillance

Epidemic Curve 2005-2007

End of June 2006: 266,000 cumulated cases
Attack rate: 35%



Discussion

- Importance of epidemic intelligence in the detection of the alert
- A real time surveillance of the epidemic
- Based on multiple and representative sources (including sentinel networks)
 - Seroprevalence study: 38% of the population (surveillance system 35%)

Conclusion

- New knowledge in epidemiology of Chikungunya
 - Exceptionally severe Chikungunya outbreak :
 - Severe cases, associated deaths
 - Morbidity
 - Economic and political cost
 - Asymptomatic cases have been assessed (15 %)
- More scientific research needed
 - Potential risk of introduction in France and Europe is being evaluated
- Coordination and exchange of epidemiological data at a regional level



Thank you

References

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- Renault P, et al. A major epidemic of Chikungunya virus infection on Réunion island, France, 2005-2006: Am. J. Trop. Med. Hyg. 2007;77(4):727-31