

P0526 **Chikungunya outbreaks in Italy, ten years apart: 2007-2017**

Giovanni Rezza*¹

¹Istituto Superiore di Sanità, Department of Infectious Diseases, Roma, Italy

Background: In the summer of 2007, Italy experienced the first outbreak of chikungunya, with more than 200 cases identified in the Emilia Romagna Region. Outbreak control was obtained through the implementation of vector control measures at the beginning of the cold season. The years later, on September 6 2017, the disease was diagnosed in a couple of individuals who had spent their vacation near the coastal town of Anzio (less than 60 Km south of Roma) and had not been abroad during the three months prior to symptoms onset. Hereby, the temporal trend and the geographical spread of chikungunya in Italy in the summer of 2017, and the main characteristics of the virus strains isolated during the outbreak, are described.

Materials/methods: Local health authorities set up a surveillance system to identify cases of chikungunya in the Lazio Region. All the other Regions were alerted to report new cases, clusters and outbreaks occurring outside the Lazio Region. Cases were confirmed by serological methods and/or PCR. Phylogenetic analysis of chikungunya virus isolates was performed.

Results: During the month of September, chikungunya cases were identified also in persons living in Roma who had not been in Anzio, suggesting a multifocal spread of the infection. By the end of October 2017, 269 cases of chikungunya were reported in the area surrounding Anzio, where the virus was likely having been introduced in June, 61 cases in Roma, and other sporadic cases or small clusters were identified in other areas of the Lazio Region. On mid-September, chikungunya cases were identified in Guardavalle Marina, a village located in the Calabria Region, where 68 cases were reported by the end of October. A link between this outbreak and the one in Anzio was demonstrated. The virus causing the 2017 outbreaks belonged to the ECSA genotype but, in contrast with the virus isolated in 2007 in Italy, did not present the A226V mutation of the E1 protein (A226V variant).

Conclusions: Mosquito control activities and medical professionals training are needed for early diagnosis of chikungunya in order to prevent and/or contain chikungunya outbreaks in the Mediterranean area.