Infezioni correlate ai viaggi e Arbovirosi

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Table 1. Common Tropical Diseases by Geographic Area

Geographic area	*Most common tropical illnesses*
Caribbean	Dengue fever, malaria
Central America	Dengue fever, malaria (mostly *Plasmodium vivax*)
South America	Dengue fever, mala
South Central Asia	Dengue fever, enter *non–Plasmodium*
Southeast Asia	Dengue fever, mala
Sub-Saharan Africa	Malaria (mostly *P. f* acute schistosomi

Table 2. Causes of Fever in Returned Travelers to the Developing World

Diagnosis	*Percentage**
Malaria	21
Diarrheal disease with fever	15
Respiratory illness with fever	14
Dengue fever	6
Nondiarrheal gastrointestinal diagnosis (including hepatitis)	5
Dermatologic infections with fever	4
Genitourinary infections with fever	4
Rickettsia	2
Typhoid and paratyphoid fever	2
Unspecified	22

Feder HM et al, Am Fam Physician. 2013

Table 3. Key Elements of the Patient History for Evaluating Fever in Returned the Developing World

What were the dates and places (urban/rural
Did they receive pretravel prophylaxis?
What were their exposures to insects, animal
Did they have sexual intercourse with locals c
What were their food and water exposures?
Did they have any illnesses during travel? Did medications?
Have they been exposed to any illnesses since United States?

Table 4. Incubation Period for Tropical Diseases That May Present with Fever

	Usual incubation period (range)
Disease	*≤ 14 days*
Arbovirus encephalitis	3 to 14 days (1 to 20 days)
Chikungunya	2 to 4 days (1 to 14 days)
Dengue fever	4 to 8 days (3 to 14 days)
Leptospirosis	7 to 12 days (2 to 26 days)
Malaria (*Plasmodium falciparum*)	6 to 30 days (weeks to months)
Malaria (*Plasmodium vivax*)	8 to 30 days (months to years)
Spotted fever group rickettsiae	3 to 21 days
Typhoid fever	7 to 18 days (3 to 60 days)
	> 14 days
Amebic liver abscess	Weeks to months
Hepatitis A	28 to 30 days (15 to 50 days)
Hepatitis E	26 to 42 days (14 to 63 days)
Schistosomiasis (Katayama)	28 to 56 days
Tuberculosis	Weeks to months to years
Visceral leishmaniasis	2 to 10 months (10 days to years)

Feder HM et al, Am Fam Physician. 2013

Wilderness and Environmental Medicine, **14**, 24–32 (2003)

REVIEW ARTICLE

Fever in the Returning Traveler, Part One: A Methodological Approach to Initial Evaluation

Michael David Schwartz, MD

From the Department of Emergency Medicine, University of Cincinnati, Cincinnati, OH.

A returned traveler with fever should be assumed to have malaria until proven otherwise,

Dengue virus (DENV)

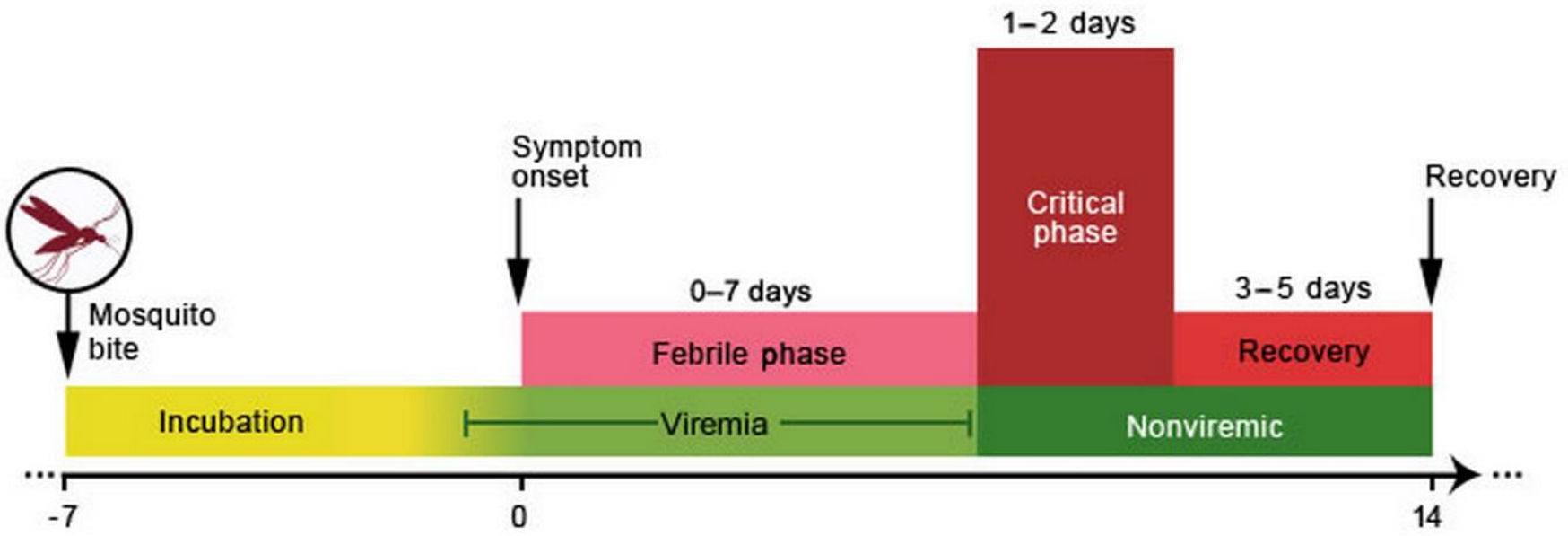
- Family *Flaviviridae*
- Genus *Flavivirus*
- Four serotype (DEN-1, DEN-2, DEN-3, DEN-4)
- Hosts: humans and non-human primates
- Human infection with one serotype is believed to confer long-lived serotype-specific immunity, but only short-lived crossimmunity between serotypes (for about two months)
- Transmission vectors: *Aedes aegypti, A. albopictus*
- Non-vectorial transmission: Mother-to child transmission, blood transfusion, organ transplant, needle stick injury or laboratory accident

Simmons CP. N Engl J Med. 2012 Apr 12;366(15):1423-32.
Barthel Clin Infect Dis. 2013 May7. [Epub ahead of print]
Wiwanitkit V. J Infect Dev Ctries. 2009 Nov 30;4(1):51-4

Dengue – Map

Based on surveillance data, official reports, published research, and expert opinion, including data from Brady et al. Refining the Global Spatial Limits of Dengue Virus Transmission by Evidence-Based Consensus. PLoS Negl Trop Dis 6(8): e1760 doi: 10.1371/journal.pntd.0001760 (2012). It was compiled by the CDC Dengue Branch in collaboration with the University of Oxford.

Dengue – Clinical course




Close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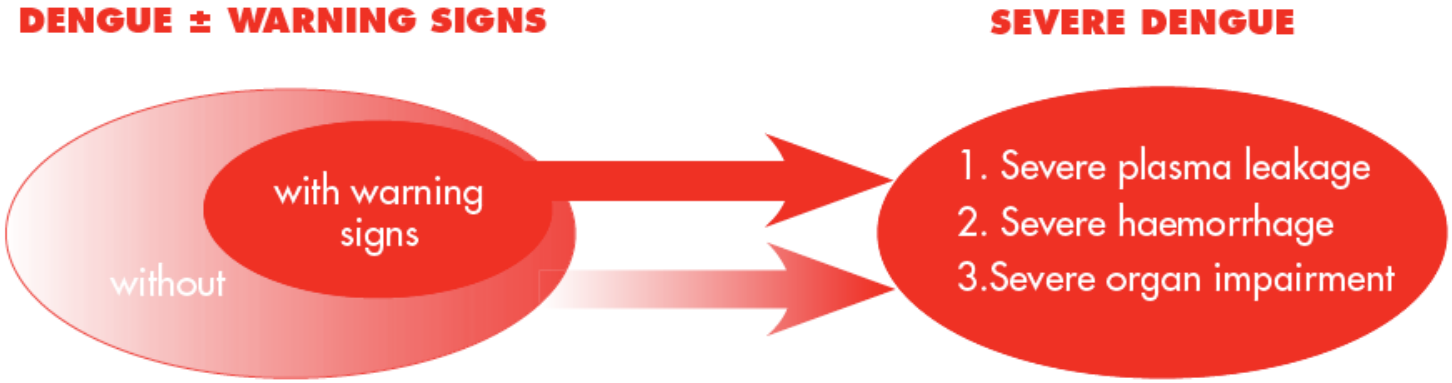
Rash of the recovery phase

Dengue- Case classification (WHO 2009)

Figure 1.4 Suggested dengue case classification and levels of severity



CRITERIA FOR DENGUE ± WARNING SIGNS

Probable dengue

live in /travel to dengue endemic area.
Fever and 2 of the following criteria:

- Nausea, vomiting
- Rash
- Aches and pains
- Tourniquet test positive
- Leukopenia
- Any warning sign

Laboratory-confirmed dengue

(important when no sign of plasma leakage)

Warning signs*

- Abdominal pain or tenderness
- Persistent vomiting
- Clinical fluid accumulation
- Mucosal bleed
- Lethargy, restlessness
- Liver enlargment >2 cm
- Laboratory: increase in HCT concurrent with rapid decrease in platelet count

*(requiring strict observation and medical intervention)

CRITERIA FOR SEVERE DENGUE

Severe plasma leakage

leading to:

- Shock (DSS)
- Fluid accumulation with respiratory distress

Severe bleeding

as evaluated by clinician

Severe organ involvement

- Liver: AST or ALT >=1000
- CNS: Impaired consciousness
- Heart and other organs

Risk factors for severe dengue

About 1% of cases can progress to a severe clinical

- **Secondary infection**
- Young age (tra i 4-6 mesi di età e 1 anno possibile presenza di livelli di anticorpi materni sub-neutralizzanti che innescano il meccanismo di ADE)
- Female sex
- High body-mass index
- Virus strain and serotype **(risk DEN-2**>DEN-3>DEN-4 >DEN-1)
- Genetic variants of the human major-histocompatibility-complex class I–related sequence B
- Phospholipase C epsilon 1 genes
- Pregnancy

Simmons CP. N Engl J Med. 2012 Apr 12;366(15):1423-32.
Machado CM. PLoS Negl Trop Dis. 2013 May 9;7(5):e2217

Hemorrhagic Manifestations

Scleral injection

Petechiae

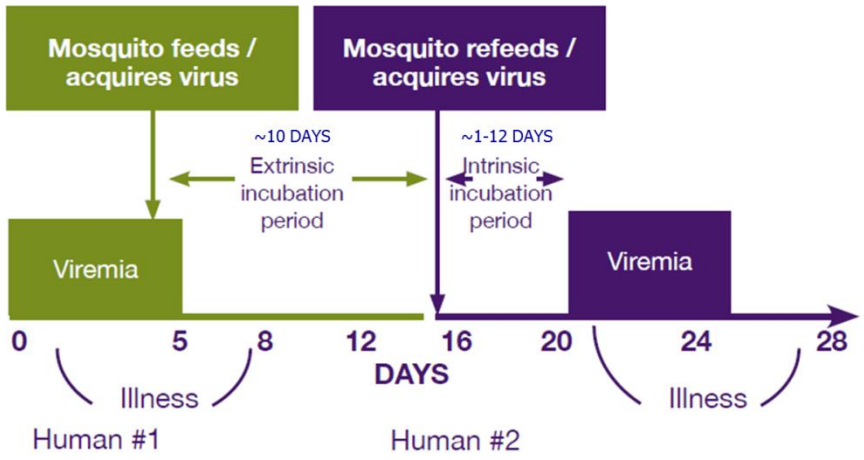
Unusual Presentations of Severe Dengue Fever

- Encephalopathy
- Hepatic damage
- Cardiomyopathy
- Severe gastrointestinal hemorrhage

CHIKUNGUNYA

- Name origin hypothesis: Swahili or Makonde word *Kun qunwala*, meaning "to become contorted" or "that which bends up"
- Togaviridae family, belonging to the genus Alphavirus
- ACUTE PHASE 1-10 days: 3–25% of people with serological evidence of infection have no obvious symptoms.

Figure 1. **Extrinsic and intrinsic incubation periods for Chikungunya virus.**

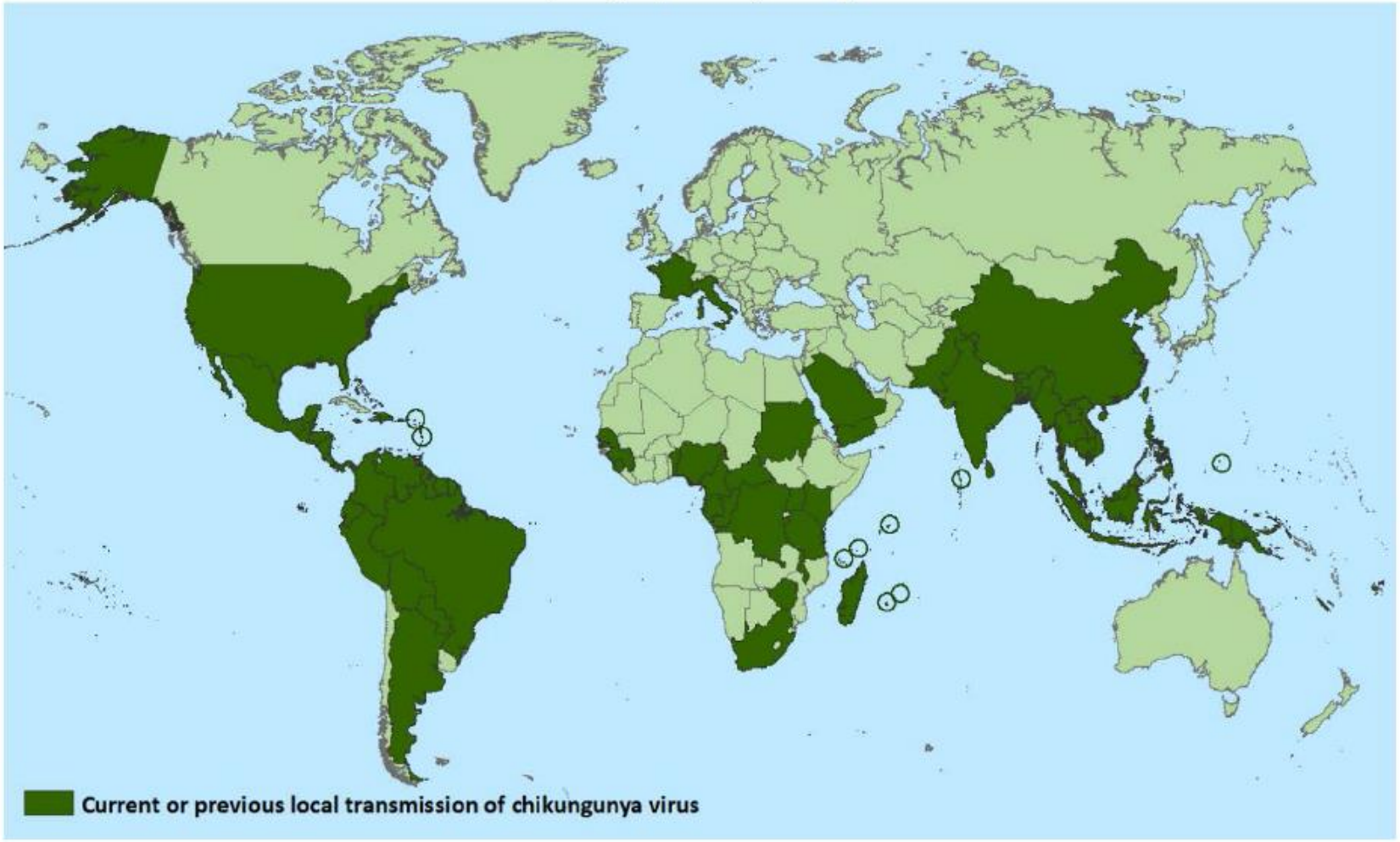


Symptom or sign	Frequency range (% of symptomatic patients)
Fever	76–100
Polyarthralgias	71–100
Headache	17–74
Myalgias	46–72
Back pain	34–50
Nausea	50–69
Vomiting	4–59
Rash	28–77
Polyarthritis	12–32
Conjunctivitis	3–56

*swelling is often associated with tenosinovitis

Countries and territories where chikungunya cases have been reported*

(as of April 22, 2016)



*Does not include countries or territories where only imported cases have been documented. This map is updated weekly if there are new countries or territories that report local chikungunya virus transmission.

Clinical presentation. **Acute disease.**

A. Edematous rash of the face

B. Edematous poylarthritis of the hands

C. Erythema that blanches with pressure

D. Periarticular swelling and joint effusion in knees

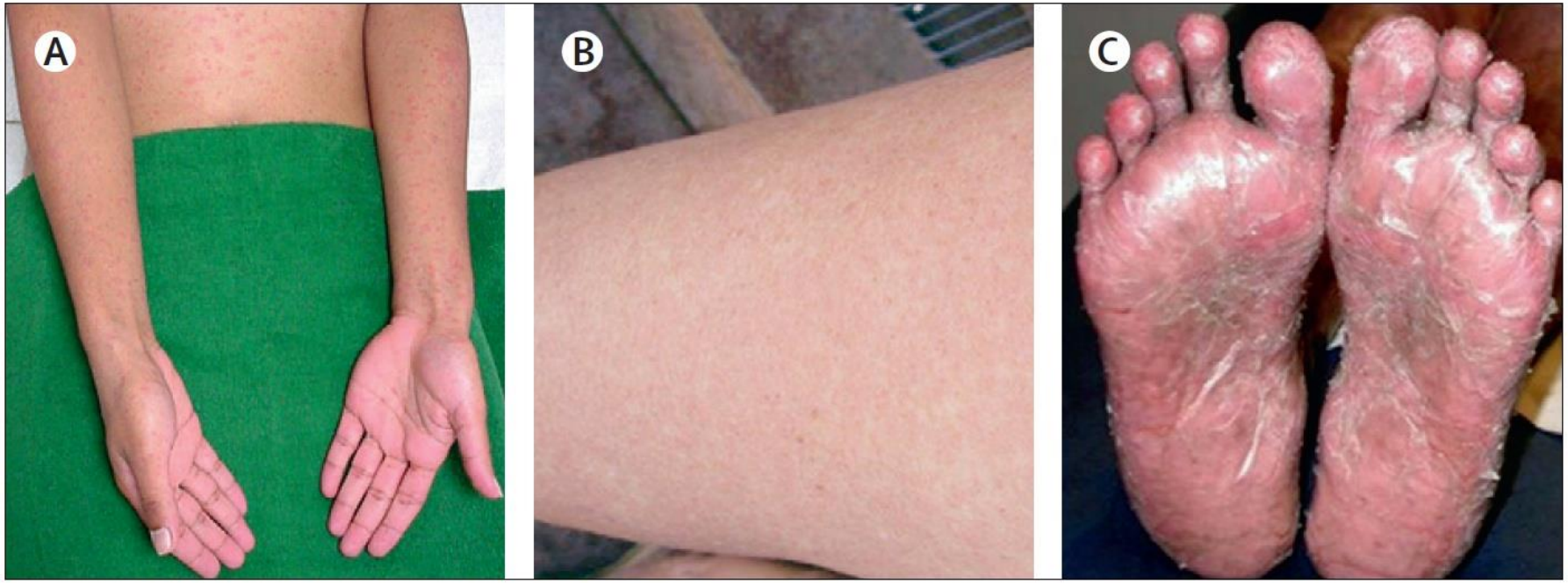


Figure 4: **Typical rashes with chikungunya virus infection**
Maculopapular rash, petechial spots and erythroderma of arms (A), legs (B), and feet (C).

E. Maculopapular rash in trunk and extremities

F. Maculopapular rash in extremities, including palms

G. Bullous lesions in infant leg

H. Infant with maculo-papular rash, petechial spots and erythema of upper and lower limbs associated with edema of the extremities

M. Elbow hygroma

N. Swollen and stiff hands in a 55-year-old man who was infected 5 years earlier

effusion

Fig. 2 : Post-chikungunya chronic arthritis – Involvement of small joints of hands with extensive edema.

Fig. 1 : Post-chikungunya chronic arthritis – Knee joint arthritis with effusion

Chikungunya, that which bends up
Source: Dr RVSN Sarma.

Arthropathy: wrists and small joints

Recent Chikungunya Virus Infection in 2 Travelers Returning from Mogadishu, Somalia, to Italy, 2016

Lorenzo Zammarchi, Claudia Fortuna, Giulietta Venturi, Francesca Rinaldi, Teresa Capobianco, Maria Elena Remoli, Gian Maria Rossolini, Giovanni Rezza, Alessandro Bartoloni

Emerg Infect Dis. 2016

- In June 2016, a Somali woman (patient 1) was referred to the Infectious and Tropical Diseases Unit, Careggi University Hospital, in Florence, Italy, because of **severe diffuse bilateral arthralgia** and **edema** in hands, wrists, ankles, and feet. Five days earlier, she had returned to Italy from **Mogadishu, Somalia**, where she had spent 45 days visiting relatives. She denied travel to other countries. She reported that symptoms started abruptly in May, 17 days after arriving in Somalia. At symptom onset, arthralgia was associated with **fever** and **skin rash**, which lasted a few days.

- In early July 2016, another Somali woman (patient 2) with **bilateral arthralgia** in her hands, wrists, ankles, and feet associated with **foot edema** sought medical care at the same hospital 7 days after returning from a 65-day trip to Mogadishu, where she visited relatives. Her symptoms started in June, 20 days after arriving in Somalia. At symptom onset, she also had **skin rash** and **fever**, which lasted a few days.

Recent Chikungunya Virus Infection in 2 Travelers Returning from Mogadishu, Somalia, to Italy, 2016

Lorenzo Zammarchi, Claudia Fortuna, Giulietta Venturi, Francesca Rinaldi, Teresa Capobianco, Maria Elena Remoli, Gian Maria Rossolini, Giovanni Rezza, Alessandro Bartoloni

Emerg Infect Dis. 2016

Table. Results of chikungunya virus testing for 2 persons who returned to Italy after traveling to Mogadishu, Somalia, 2016*

Laboratory test performed	Place where test was performed	Results	
		Patient 1†	Patient 2‡
OnSite Chikungunya IgM Combo Rapid Test-Cassette (CTK Biotech, San Diego CA, USA)§	Careggi University Hospital	Positive	Negative
Chikungunya virus IFA IgG (Euroimmun AG, Luebeck, Germany)¶	Careggi University Hospital	Titer ≥1:100#	Titer ≥1:100#
Chikungunya virus IFA IgM (Euroimmun)**	Careggi University Hospital	Positive	Positive
Anti-CHIKV IgM ELISA (Euroimmun)††	ISS, National Reference Laboratory for Arboviruses	Index 7.9‡‡	Index 3.4‡‡
PRNT for Chikungunya virus	ISS, National Reference Laboratory for Arboviruses	PRNT80 ≥1:10§§	PRNT80 ≥1:10§§

This report confirms the importance of travel medicine services in performing early diagnosis of imported arboviral diseases, not only to thwart secondary transmission during periods of competent vector activity but also to help to detect or confirm virus circulation in previously unaffected countries.

Severe manifestations of CHIKV

- Case fatality 1:1000
- Infants, children and elderly at higher risk
- Individulas >65yo have 50-fold higher risk of death compared with those <45yo
- Encephalitis, encephalopathy, Guillain-Barré, flaccid paralisis (<0.1% of admission)
- Most have underlying conditions (diabetes, stroke, transplacental transmission, epilepsy, hypertension)

Table 2. **Atypical manifestations of CHIKV infection.**

System	Clinical manifestations
Neurological	Meningoencephalitis, encephalopathy, seizures, Guillain-Barré syndrome, cerebellar syndrome, paresis, palsies, neuropathy
Ocular	Optic neuritis, iridocyclitis, episcleritis, retinitis, uveitis
Cardiovascular	Myocarditis, pericarditis, heart failure, arrhythmias, hemodynamic instability
Dermatological	Photosensitive hyperpigmentation, intertriginous aphthous-like ulcers, vesiculobullous dermatosis
Renal	Nephritis, acute renal failure
Other	Bleeding dyscrasias, pneumonia, respiratory failure, hepatitis, pancreatitis, syndrome of inappropriate secretion of antidiuretic hormone (SIADH), hypoadrenalism

ZIKV-caratteristiche

- Zika virus è un arbovirus del genere *Flavivirus* appartenente alla famiglia *Flaviviridae* come i virus di Dengue, Febbre Gialla, Encefalite Giapponese, West Nile
- La malattia è trasmessa attraverso la puntura di zanzara del genere *Aedes*
- Descritta anche trasmissione tramite:
  - emotrasfusioni
  - rapporti sessuali
  - trasmissione perinatale
  - Morso di scimmia? 1 case report

Journal of Clinical Virology 63 (2015) 32–35

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journal homepage: www.elsevier.com/locate/jcv

Case report

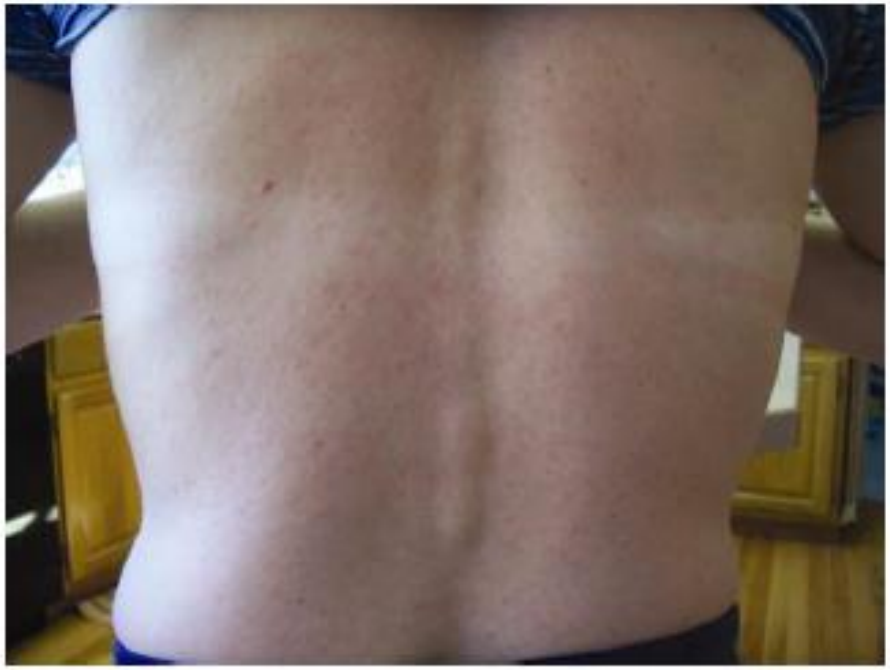
Zika virus infections imported to Italy: Clinical, immunological and virological findings, and public health implications

Lorenzo Zammarchi[a], Giulia Stella[a], Antonia Mantella[a], Dario Bartolozzi[b], Dennis Tappe[c], Stephan Günther[c], Lisa Oestereich[c], Daniel Cadar[c], César Muñoz-Fontela[c,d], Alessandro Bartoloni[a,b,*,1], Jonas Schmidt-Chanasit[c,e,1]

[a] Clinica Malattie Infettive, Dipartimento di Medicina Sperimentale e Clinica, Università Degli Studi di Firenze, Largo Brambilla 3, 50134 Firenze, Italy
[b] SOD Malattie Infettive e Tropicali, Azienda Ospedaliero-Universitaria Careggi, Largo Brambilla 3, 50134 Firenze, Italy
[c] Bernhard Nocht Institute for Tropical Medicine, WHO Collaborating Centre for Arbovirus and Haemorrhagic Fever Reference and Research, National Reference Centre for Tropical Infectious Diseases, Bernhard-Nocht-Strasse 74, 20359 Hamburg, Germany
[d] Heinrich Pette Institute, Leibniz Institute for Experimental Virology, Martinistrasse 52, 20251 Hamburg, Germany
[e] German Centre for Infection Research (DZIF), Partner Site Hamburg-Luebeck-Borstel, Hamburg, Germany

We report the first two cases of laboratory confirmed Zika virus (ZIKV) infections imported into Italy from French Polynesia. Both patients presented with low grade fever, malaise, conjunctivitis, myalgia, arthralgia, ankle oedema, and axillary and inguinal lymphadenopathy. One patient showed leukopenia with relative monocytosis and thrombocytopenia.

ZIKV-clinica



Incubazione 4-7 gg (<14 gg)

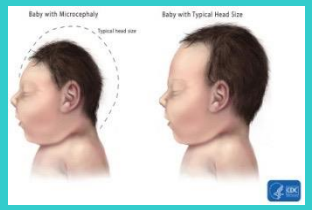
- **rash cutaneo** (90%) generalmente maculare o maculo-papulare, pruriginoso e a evoluzione centrifuga
- **cefalea** (67%)
- **febbre di basso grado** (67%)
- **artralgia** (58%)
- **mialgia** (49%)
- **dolore oculare retro-orbitario** (40%)
- **congiuntivite bilaterale** (39%)
- **edemi periarticolari** (23%)
- **linfoadenopatia** localizzata o generalizzata (40% dei casi)

Zika virus infection in a traveller returning to Europe from Brazil, March 2015

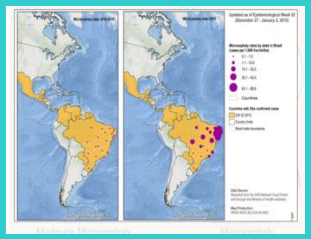
L Zammarchi[1], D Tappe[2], C Fortuna[3], M E Remoli[3], S Günther[2], G Venturi[3], A Bartoloni (alessandro.bartoloni@unifi.it)[1], J Schmidt-Chanasit[2]

1. Clinica Malattie Infettive, Dipartimento di Medicina Sperimentale e Clinica, Università Degli Studi di Firenze, Florence, Italy
2. Bernhard Nocht Institute for Tropical Medicine, WHO Collaborating Centre for Arbovirus and Haemorrhagic Fever Reference and Research, National Reference Centre for Tropical Infectious Diseases, Hamburg, Germany
3. Department of Infectious, Parasitic and Immune-Mediate Diseases, Istituto Superiore di Sanità, Rome, Italy

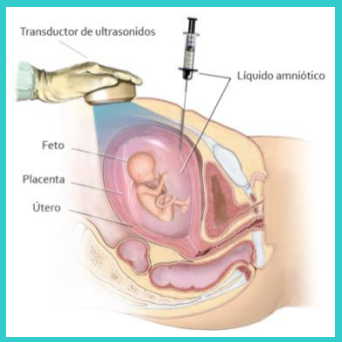
May 2015: Brazil diagnosis of first autochthonous cases (North-Eastern States). The virus probably was circulating since early 2015



<u>September 2015:</u> first reports from physician of an increase in the number of infants born with microcephaly in Zika virus-affected areas



October 2015: Brazil <u>increase of microcephaly cases</u> (North-Eastern States<u>). Risk ↑20 times from estimated incidence of 1/10,000 to 20/10,000</u>



<u>December 2015:</u> Detection of Zika virus RNA from amniotic fluid of 2 fetuses with microcephaly.

CDC ecdc EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL World Health Organization

<u>November 2015-February 2016:</u> ECDC, CDC and WHO alerts on possible association between microcephaly and ZIKV

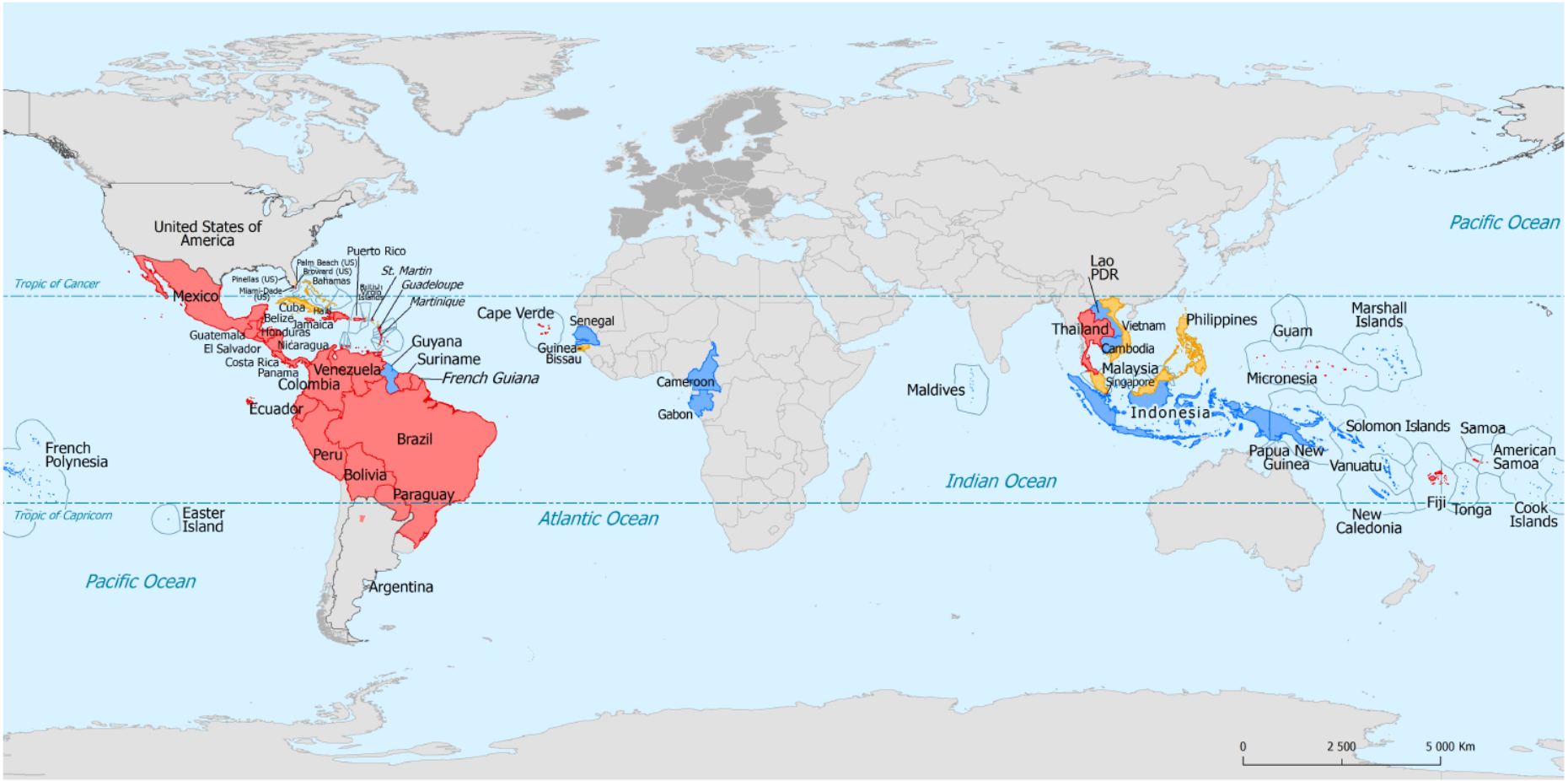
<u>May 2016:</u> 8 countries report CNS and other fetal malformation potentially related to ZIKV

COMMUNICABLE DISEASE THREATS REPORT

CDTR

Week 37, 11-17 September 2016

Countries or territories with reported confirmed autochthonous cases of Zika virus infection in the past three months, as of 16 September 2016



- Widespread transmission in the past three months
- Sporadic transmission in the past three months
- Past transmission (2007 – three months ago)
- *EU/EEA Member States, including outermost regions*
- Other countries and territories
- Maritime Exclusive Economic Zones for non-visible areas

ECDC. Map produced on 16 Sep 2016
Map your data at: https://emma.ecdc.europa.eu

Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015 Latest update: 16 September 2016

- **USA**: 22 new locally acquired cases have been recorded in Florida over the past week. To date, 78 locally-acquired and 650 imported cases of Zika have been reported in Florida
- **Singapore**: as of 15 September 2016, the Singapore National Environment Agency (NEA) records 355 locally-acquired ZIKV cases, an increase of 88 cases since the last CDTR. To date, ZIKV has been confirmed in eight pregnant women.
- **Thailand**: as of 15 September 2016 and according to media quoting the Ministry of Health, Thailand records about 200 cases since the beginning of the year in 16 provinces
- **Malaysia**: 6 cases have been reported by national authorities between 1 and 13 September
- **EU/EEA imported cases:** 19 countries have reported 1614 travel associated Zika virus infections through The European Surveillance System (TESSy). This corresponds to an increase of 57 cases since the last update. Since week 45/2015, seven EU countries reported 80 Zika cases among pregnant women

Since February 2016, 12 countries have reported evidence of person-to-person transmission of Zika virus, probably via a sexual route

Pan American Health Organization
World Health Organization
Regional Office for the Americas

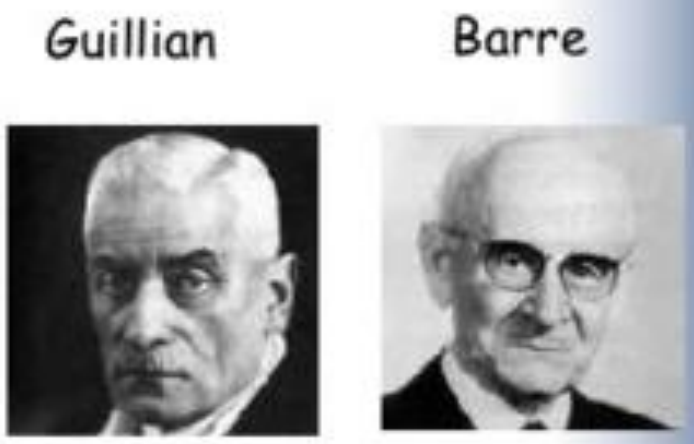
Zika cases and congenital syndrome associated with Zika virus reported by countries and territories in the Americas, 2015 - 2016
Cumulative cases

Data as of 9 November 2016 3:00 PM EST

Autochthonous cases[a]		Imported cases	Incidence Rate[b]	Deaths among Zika cases[c]	Confirmed congenital syndrome associated with Zika virus infection[d],	Population X 1000[e]
Suspected	Confirmed					
515,969	169,865	4,604	68.72	15	2,265	998,040

ZIKV- Possibili complicanze?

- Associazione Sindrome di Guillain Barré con l'infezione da Zika
- Riscontrata per la prima volta in Polinesia Francese
- Rischio di sviluppare una sindrome di Guillain Barré dopo una infezione da Zika virus è intorno al 2.4% (simile a quello che si ha dopo una infezione da *Campylobacter jejuni*)
- Esordio della sintomatologia neurologica seguiva di circa 6 giorni quello l'esordio della sintomatologia dovuta a Zika virus



Guillain-Barré Syndrome outbreak associated with Zika virus infection in French Polynesia: a case-control study

Van-Mai Cao-Lormeau, Alexandre Blake*, Sandrine Mons, Stéphane Lastère, Claudine Roche, Jessica Vanhomwegen, Timothée Dub, Laure Baudouin, Anita Teissier, Philippe Larre, Anne-Laure Vial, Christophe Decam, Valérie Choumet, Susan K Halstead, Hugh J Willison, Lucile Musset, Jean-Claude Manuguerra, Philippe Despres, Emmanuel Fournier, Henri-Pierre Mallet, Didier Musso, Arnaud Fontanet*, Jean Neil*, Frédéric Ghawché**

Pan American Health Organization
World Health Organization
REGIONAL OFFICE FOR THE Americas

Zika - Epidemiological Update

3 November 2016

Table 1. Countries and territories in the Americas with GBS in the context of Zika virus circulation.

Increase in GBS with Zika virus lab confirmation in at least one case of GBS	Zika virus laboratory confirmation in at least one case of GBS	Increase in GBS with no Zika virus lab confirmation in any of the cases
Brazil	Costa Rica	Paraguay
Colombia	Grenada	Saint Vincent and the Grenadines
Dominican Republic	Haiti	
El Salvador	Mexico	
French Guiana	Panama	
Guadeloupe		
Guatemala		
Honduras		
Jamaica		
Martinique		
Puerto Rico		
Suriname		
Venezuela		

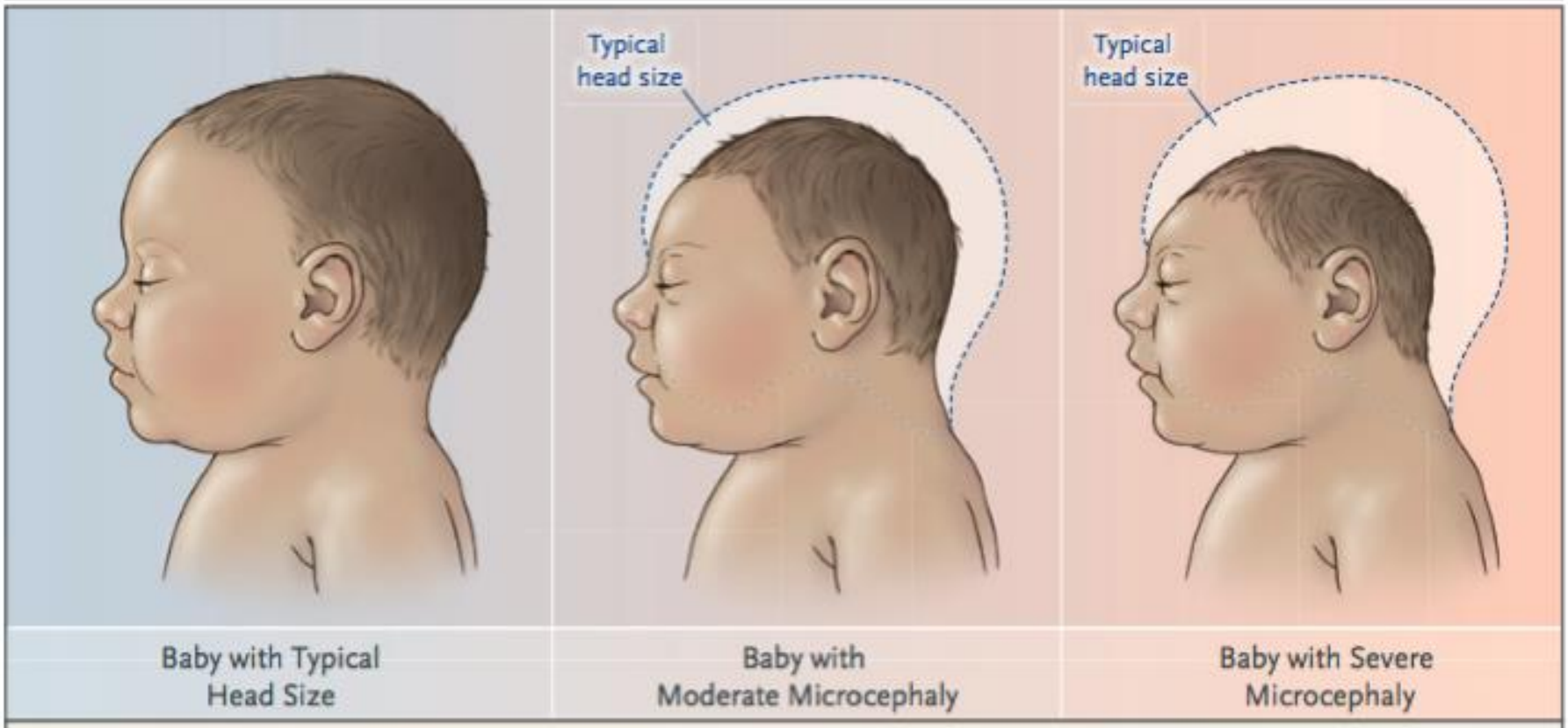
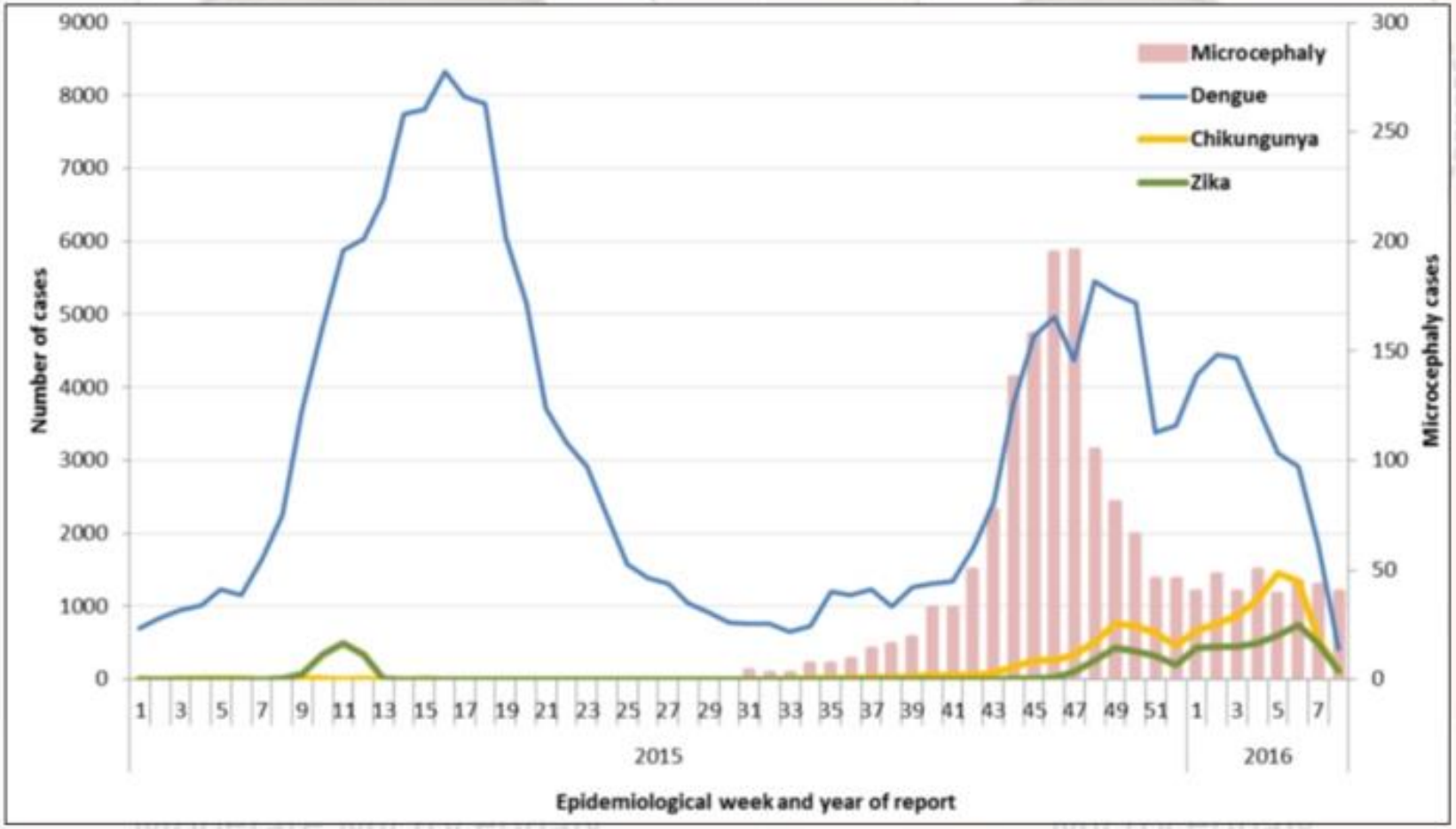


Figure 4. Infants with Moderate or Severe Microcephaly Associated with Maternal Zika Virus Infection, as Compared with a Typical Newborn.

The increases of microcephaly cases in Pernambuco state, Brazil were registered 7-8 months after the first detection of Zika virus cases.



PAHO (March 2016)

An autochthonous case of Zika due to possible sexual transmission, Florence, Italy, 2014

G Venturi [1], L Zammarchi [2 3], C Fortuna [1], ME Remoli [1], E Benedetti [1], C Fiorentini [1], M Trotta [3], C Rizzo [4], A Mantella [2], G Rezza [1], A Bartoloni [2 3]

1. Department of Infectious, Parasitic and Immune-Mediate Diseases, Istituto Superiore di Sanità, Rome, Italy
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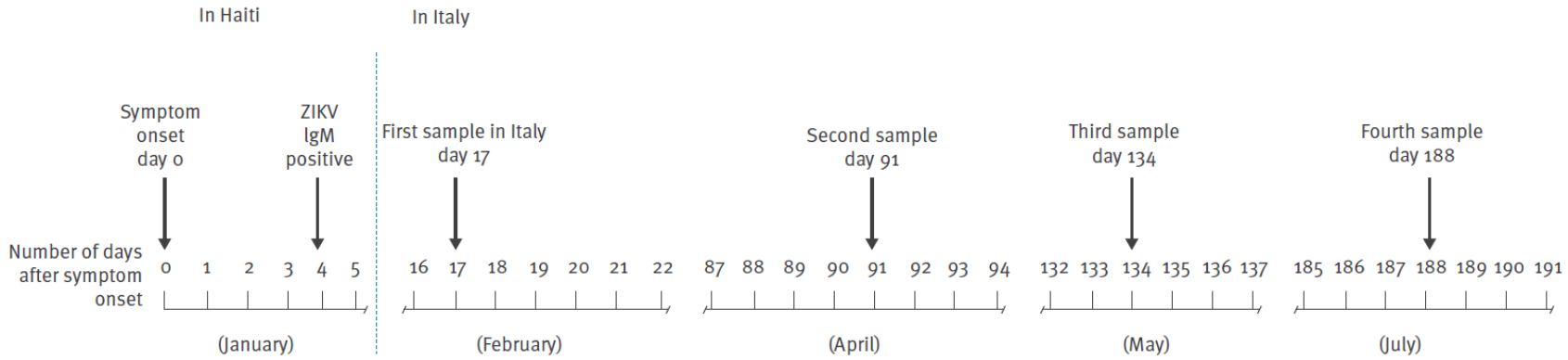
3. SOD Malattie Infettive e Tropicali, Azienda Ospedaliero-Universitaria Caeggi, Florence, Italy
4. National Center for Epidemiology and Health Promotion, Istituto Superiore di Sanità, Rome, Italy.

Persistent detection of Zika virus RNA in semen for six months after symptom onset in a traveller returning from Haiti to Italy, February 2016 Nicastri et al, Euro Surveill. 2016

- A man reported to the National Institute of Infectious Diseases in Rome, Italy, a history of five day self-limiting febrile syndrome (< 38 ° C) associated with asthenia and an erythematous rash during a stay in Haiti from mid-January to early February 2016
- Zika virus (ZIKV) infection was diagnosed in Haiti by ZIKV specific IgM serology four days after symptom onset and he returned to Italy 14 days after symptom onset.



Type of test and sample	Results			
	Day 17[a]	Day 91[a]	Day 134[a]	Day 188[a]
ZIKV real-time RT-PCR serum	Neg	Neg	Neg	NT
ZIKV real-time RT-PCR urine	Neg	Pos (CT: 36.1)	Neg	NT
ZIKV real-time RT-PCR saliva	Pos (CT: 36.4)	Pos (CT: 35.4)	Neg	NT
ZIKV real-time RT-PCR semen	NT	Pos (CT: 29.6)	Pos (CT: 32.5)	Pos (CT: 30.2)
IFA ZIKV IgM titre	1:160	1:40	1:20	<1:20
IFA ZIKV IgG titre	1:640	1:1,280	1:2,560	1:640
MNT antibody titre	1:160	≥1:320	≥1:320	NT

[a]Number of days after symptom onset.

- On March 14, 2014, a 35-year-old Peruvian man was admitted to the University Division of Infectious Diseases at Siena University Hospital (Siena, Italy) because of acute onset of severe headache, mental confusion, vomiting, and abdominal pain.
- The patient had migrated to Italy from Peru 7 years before and he had never traveled back to his country of origin
- Since 2008, he was admitted four times to different Italian hospitals with meningitis
- In the first two instances, cerebrospinal fluid (CSF) culture yielded *Escherichia coli* and *Enterococcus faecium*, respectively, while two other episodes were diagnosed clinically since repeated attempts to perform lumbar puncture failed
- During the first episode of meningitis, because of concomitant severe abdominal pain, he underwent an explorative laparotomy that did not reveal any abnormal finding.
- *S. stercoralis* larvae were found in stool microscopy during the first three episodes of meningitis
- HTLV antibodies were tested by a commercial chemiluminescent microparticle immunoassay and resulted strongly positive
- The patient was treated with a first cycle of 200 mg/kg/dose ivermectin once daily on day 1, 2, 15, and 16

Chronic strongyloidiasis – Don't look and you won't find

Page W et al, Aust Fam Physician. 2016

- Chronic strongyloidiasis in humans is caused by the remarkably persistent roundworm *Strongyloides stercoralis*, distinguished by its unique autoinfective lifecycle
- General practitioners (GPs) have an important role in diagnosing and treating chronic strongyloidiasis to prevent cases of fatal hyperinfection
- Unless strongyloidiasis is deliberately considered, the diagnosis is unlikely to be made

Acute Strongyloidiasis: A Rarity. Chronic Strongyloidiasis: A Time Bomb!

Caumes E et al, J Travel Med. 2011

- Chronic strongyloidiasis is usually asymptomatic or gives rise to mild gastrointestinal symptoms, most often peptic ulcer-like symptoms
- Of greater concern is its potential to become a fulminant, fatal illness in appropriate circumstances
- Strongyloides hyperinfection syndrome and dissemination result from decreased cell-mediated immunity
- Disseminated strongyloidiasis carries mortality rates from 50% to 87%, even with treatment
- This infection is now considered the leading cause of death from a parasitic disease in the United States.

Published online April 6, 2015; doi:10.4269/ajtmh.14-0716.

Case Report: Persistent Strongyloidiasis Complicated by Recurrent Meningitis in an HTLV Seropositive Peruvian Migrant Resettled in Italy

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Take-home message learned from this case

1) Clinicians working in non-endemic areas should be aware of neglected infectious diseases such as strongyloidiasis and HTLV-1, which, if associated, may determine a fatal outcome
2) Patients with meningitis due to intestinal bacteria should undergo serological and parasitological test for strongyloidiasis
3) Patients with meningitis and strongyloidiasis, as well as those with strongyloidiasis who fail to respond to antiparasitic treatment, should be tested for HTLV-1
4) In immunocompromised patients with strongyloidiasis, serology for *Strongyloides* may be falsely negative, and fecal-based tests, including culture for *Strongyloides*, are mandatory
5) Ivermectin should be made universally available for the treatment of strongyloidiasis
6) In HTLV-1 infected patients, efficacy of standard antihelmintic regimens is reduced, therefore strongyloidiasis must be treated aggressively

Louse-Borne Relapsing Fever with Meningeal Involvement in an Immigrant from Somalia to Italy, October 2015

Zammarchi et al, Vector Borne Zoonotic Dis. 2016

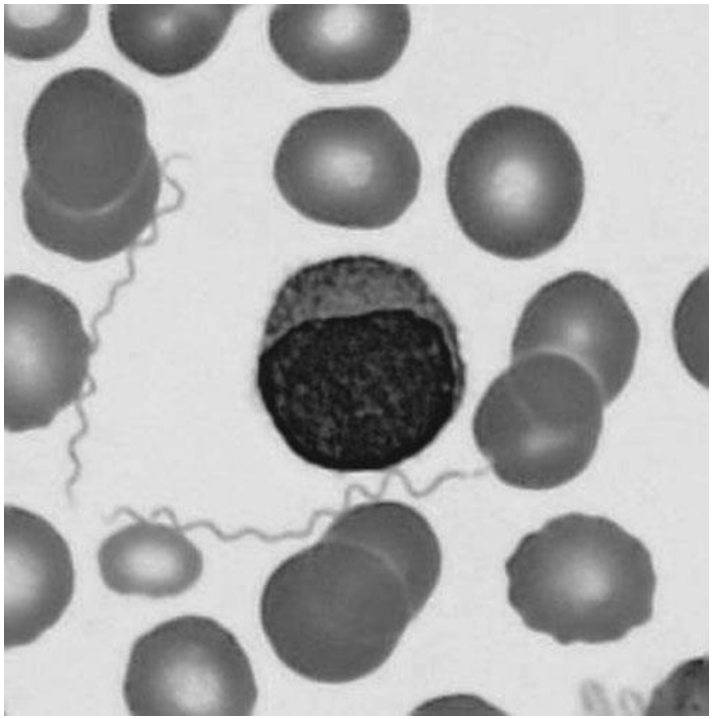
- A 19-year-old Somali male presented to the emergency department of Florence, Careggi University Hospital, Florence, with a 3-day history of **high fever**, **abdominal pain, dysuria, and painful urination associated with constipation**.
- The patient had disembarked in Sicily 10 days before admission after a migration trip from his country of origin through Kenya, South Sudan, Sudan, and Libya and reached Florence, through Bologna.
- Physical examination revealed fever (39,1° C), blood pressure 120/70 mmHg, abdominal tenderness on epigastrium, and right upper quadrant and neck stiffness.
- Chest X-ray, abdominal ultrasonography, head CT scan = normal

- Blood test: **thrombocytopenia** (82000), **elevated procalcitonin** (25.67 ng/mL), **increased fibrinogen** (1139 mg/dL)
- CSF: clear, leucocytes slightly increased (25/lL, 86% polymorphonucleates, 14% mononucleates)
- Hemoscopy for malaria revealed presence of **spirochetes and no malaria parasites**

Louse-Borne Relapsing Fever with Meningeal Involvement in an Immigrant from Somalia to Italy, October 2015

Zammarchi et al, Vector Borne Zoonotic Dis. 2016

- Doxycycline 100 mg twice a day for 7 days was started
- He was discharged on day 7
- In the following 2 months, no other case with LBRF was diagnosed in Florence
- Nested polymerase chain reaction (PCR) for *Borrelia* spp. was positive on both blood and CSF specimens
- Amplification and sequencing with universal 16S rDNA primers D88 and E94 revealed a 100% identity with *B. recurrentis* A1



Journal of Travel Medicine

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Brief communication

Brief communication

Travelers lowering their guard: a bacterial, viral and protozoan co-infection after a five-day journey in India

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Abstract

We present a case of concurrent infections by *Campylobacter jejuni, Giardia intestinalis* and Hepatitis E virus acquired during a 5-days travel to India by an Italian traveller. Professionals responsible for pre- and post-travel care should underline food and water precautions and prescribe an adequate diagnostic work-up in symptomatic patients.

Published Date: 2011-10-28 12:40:11
Subject: PRO/AH/EDR> Crimean-Congo hem. fever - Spain: (EX) infected ticks
Archive Number: 20111028.3209

CRIMEAN-CONGO HEMORRHAGIC FEVER - SPAIN: (EXTREMADURA) INFECTED TICKS

- Two pools of *Hyalomma lusitanicum* [ticks], each one containing RNA from 10 ticks, were found positive to Crimean-Congo hemorrhagic fever virus (CCHFv) after screening of 117 adults, collected in Caceres ([Extremadura] Spain), by RT-PCR
- A sequence (the other one failed) showed that a CCHFv strain with 98 percent similarity with those recorded in Mauritania and Senegal is circulating in south-western Europe.

Crimean-Congo Hemorrhagic Fever Virus in Ticks from Migratory Birds, Morocco[1]

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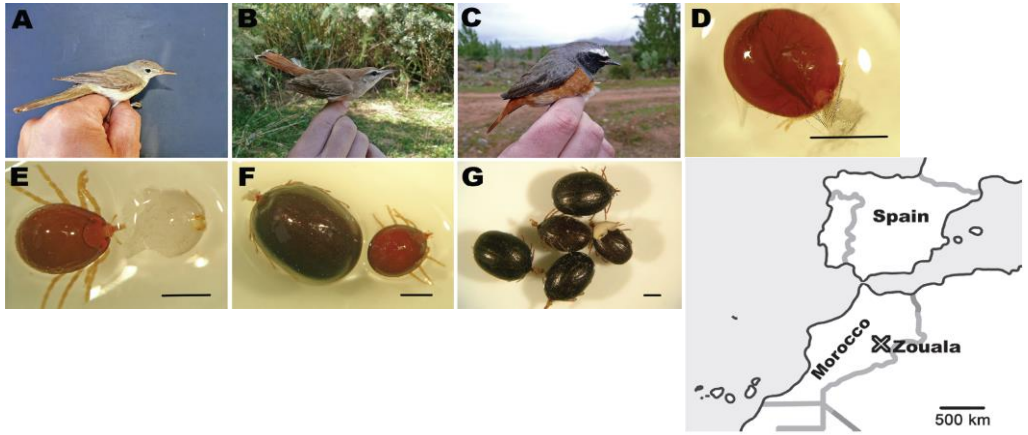
Paula Santibáñez, David Mazuelas, Juan Arizaga,
Ariñe Crespo, Óscar Gutiérrez,
Juan Francisco Cuadrado, and José A. Oteo



- The detection of CCHFV in ticks from migratory birds in Zouala demonstrates the circulation of this virus in Morocco
- This country has optimal conditions for the establishment of CCHF, including populations of *H. marginatum* ticks and reservoirs of the virus, such as livestock
- Furthermore, autochthonous cases of the disease have been reported in neighboring Mauritania
- Our finding of 3 positive tick pools demonstrates the potential dispersion of the virus through infected ticks transported by migratory birds
- Several bird species migrate in the spring from southern or central Africa to northern Europe
- The Iberian Peninsula may be a stopover or breeding site along those routes, which suggests that migratory birds may transport *H. marginatum* ticks from Africa to Europe

Published Date: 2016-09-01 12:51:45
Subject: PRO/AH/EDR> Crimean-Congo hem. fever - Spain: (CL) autochthonous, 1st rep
Archive Number: 20160901.4458484

CRIMEAN-CONGO HEMORRHAGIC FEVER - SPAIN: (CASTILE AND LEON) AUTOCHTHONOUS, FIRST REPORT

A ProMED-mail post
http://www.promedmail.org
ProMED-mail is a program of the
International Society for Infectious Diseases
http://www.isid.org

- Madrid regional health authorities confirmed 2 cases of Crimean-Congo hemorrhagic fever [CCHF] have been detected in the Spanish capital
- Regional health authorities said in a statement that it was the 1st home-grown, non-imported case of Crimean-Congo hemorrhagic fever in western Europe
- A 62 year old man died on 25 Aug 2016 in Madrid's Gregorio Marañón University Hospital, having been admitted first to the Infanta Leonor Hospital, close to the Vicálvaro district in the south-east of the city
- The 2nd patient is an intensive care nurse at that 1st hospital who was infected by the virus whilst caring for the 62 year old man

Published Date: 2016-09-22 16:33:24
Subject: PRO/AH/EDR> Crimean-Congo hem. fever - Spain (04): contact HCW discharged
Archive Number: 20160922.4508260

CRIMEAN-CONGO HEMORRHAGIC FEVER - SPAIN (04): CONTACT HEALTH CARE WORKER DISCHARGED
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- A Spanish nurse who contracted Congo fever while caring for a man who died from the virus, in the 1st non-imported case reported in Western Europe, was discharged from hospital on 21 Sep 2016, officials said.

- The nurse became infected while treating a 62-year-old man who died from the virus on 25 Aug 2016. He caught the virus after he was bitten by a tick while walking in the countryside in the northwestern Spanish region of Castile and Leon.

- Spanish health authorities said this was the 1st time the disease had been found in Western Europe in someone who had not travelled to an endemic area