COMMUNICABLE DISEASE THREATS REPORT

CDTR
Week 28, 7-13 July 2013

All users

This weekly bulletin provides updates on threats monitored by ECDC.

I. Executive summary

EU Threats

Hepatitis A - Multistate (Europe) - 2013 outbreak

Opening date: 9 April 2013 Latest update: 31 May 2013

Between 1 October 2012 and 11 July 2013, Denmark, Finland, Norway and Sweden reported hepatitis A (HAV) cases due to sub-genotype IB with two related sequences. None of the cases had travel history outside the EU within the period of their potential exposure. Overall, 104 cases have been reported associated with this outbreak, of which 59 are confirmed. The source of the outbreak has not been confirmed but epidemiological investigations in Denmark and Sweden point towards frozen strawberries as the vehicle of infection.

➔Update of the week

This week, Denmark reported one additional probable case.

Hepatitis A -Multistate (Europe)- ex Italy

Opening date: 10 May 2013 Latest update: 17 June 2013

An outbreak of hepatitis A (HAV) involving German, Polish and Dutch travellers returning from northern Italy was reported through the Early Warning and Response System. Local Italian authorities also reported an increase in HAV cases in 2013 both at the national level and in the implicated area. In addition, Ireland reported three non-travel-related cases whose isolates share a sequence identical to that of the Italian outbreak. As the exposure of the cases occurred in Italy and Ireland, this suggests that cases have been exposed to the same contaminated vehicle of infection distributed in at least these two countries. Epidemiological, microbiological and environmental investigations indicate mixed frozen berries as the most likely vehicle of infection for these outbreaks.

Travellers to areas reporting HAV outbreaks should be reminded of the availability of vaccination to prevent the risk of HAV transmission while travelling.

➔Update of the week

In the past week, no new cases were reported in Italy, Germany, Poland, the Netherlands or Ireland.

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Non EU Threats

West Nile virus - Multistate (Europe) - Monitoring season 2013

Opening date: 3 June 2013 Latest update: 28 June 2013

West Nile fever (WNF) is a mosquito-borne disease which causes severe neurological symptoms in a small proportion of infected people. During the transmission season between June and November, ECDC monitors the situation in EU Member States and in neighbouring countries in order to inform blood safety authorities regarding WNF-affected areas and identify significant changes in the epidemiology of the disease. In the 2012 transmission season, 237 probable and confirmed cases have been reported in the EU, and 670 cases in neighbouring countries.

➔Update of the week

During the past week, no human cases of West Nile fever have been detected in EU Member States.

Middle East respiratory syndrome- coronavirus (MERS CoV) - Multistate

Opening date: 24 September 2012 Latest update: 11 July 2013

Between April 2012 and 11 July 2013, 81 laboratory-confirmed cases, including 45 deaths, of an acute respiratory disease have been notified to WHO. The new virus, named Middle East respiratory syndrome coronavirus (MERS-CoV), is genetically distinct from the coronavirus that caused the SARS outbreak. Cases have originated in Saudi Arabia, Qatar, Jordan and the United Arab Emirates. In addition, cases have occurred in Germany, the United Kingdom, Tunisia, France and Italy in patients who were either transferred for care of the disease or returned from the Middle East. The reservoir of the novel coronavirus has not been established, nor is it clear how transmission occurs.

➔Update of the week

Between 5 and 11 July 2013, four new cases of MERS-CoV were reported. Two fatalities in previously notified cases were reported during the same time period.

Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006 Latest update: 10 July 2013

Dengue fever is one of the most prevalent vector-borne diseases in the world, affecting an estimated 50-100 million people each year, mainly in the tropical regions of the world. The identification of sporadic autochthonous cases in non-endemic areas in recent years has already highlighted the risk of locally-acquired cases occurring in EU countries where the competent vectors are present. The recent dengue outbreak in the Autonomous Region of Madeira, Portugal in October 2012 further underlines the importance of surveillance and vector control in other European countries.

➔Update of the week

So far in 2013, no autochthonous dengue cases have been reported in European countries apart from sporadic cases in Madeira in January.

Novel cyclovirus - Multistate - central nervous system infections

Opening date: 19 June 2013

A novel cyclovirus, named CyC-VN, was identified in the cerebrospinal fluid (CSF) specimens from two Vietnamese patients with central nervous sytem (CNS) infections of unknown aetiology. The virus was subsequently detected in 4% of 642 CSF specimens from Vietnamese patients with suspected or confirmed CNS infections. Similar detection rates in faeces from healthy children suggested food-borne or oral-faecal transmission routes, while frequent detection in faeces from Vietnamese pigs and poultry suggests the existence of animal reservoirs for such transmission. Recently cyclovirus has also been detected in serum or CSF specimens from patients with paraplegia in Malawi. Detection of cycloviruses in human or animal samples from Europe has not yet been reported.

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II. Detailed reports

Hepatitis A - Multistate (Europe) - 2013 outbreak

Opening date: 9 April 2013 Latest update: 31 May 2013

Epidemiological summary

From 1 October 2012 until 11 July 2013, Denmark, Finland, Norway and Sweden reported 104 HAV cases due to genotype IB with two related sequences. None of the cases had travel history outside the EU within the period of their potential exposure.

Epidemiological investigations in Denmark and Sweden point towards frozen strawberries as the vehicle of infection.

On 22 May 2013, the Swedish Institute for Infectious Disease Control (SMI) published a press release indicating that frozen strawberries of non-domestic origin are likely to be the source of the Swedish outbreak. Other types of berries are no longer suspected in this outbreak.

On 30 May 2013, the Danish Food Safety Authority confirmed that specific products with frozen strawberries packaged in Belgium and sold in Denmark, have been voluntarily recalled. Both epidemiological and product investigations point towards these specific products of frozen strawberries as the vehicle of infection for the ongoing hepatitis outbreak in the Nordic countries.

Food authorities in the affected Nordic countries have recommended that citizens should boil frozen berries or berries of non-domestic origin before consumption.

Web sources: ECDC HAV factsheet | Eurosurveillance 25 April 2013

ECDC assessment

The identification of closely-related HAV sequences in four different countries confirms that this is a multinational food-borne outbreak. The source of the multi-country outbreak has not been confirmed, but epidemiological investigations in Denmark and Sweden point towards frozen strawberries as the vehicle of infection.

As control measures have been implemented in the four affected countries and the number of reported cases has declined, ECDC will close this event.

Actions

ECDC and EFSA published a joint rapid outbreak assessment on 16 April.

Hepatitis A -Multistate (Europe)- ex Italy

Opening date: 10 May 2013 Latest update: 17 June 2013

Epidemiological summary

Since 1 January 2013, 16 laboratory-confirmed cases of hepatitis A virus (HAV) infection have been reported in Germany, the Netherlands and Poland. All cases have a history of travel to the autonomous provinces of Trento and Bolzano in northern Italy during the exposure period. During the same period, Italy experienced an increase in cases of HAV infection, both in province of Trento and at national level. In the first six months of 2013, Italy reported more than 200 cases in excess of the mean number of cases reported in the same period for the last three years. This increase in cases is likely to be associated with this outbreak.

Additionally, Ireland reported three cases whose isolates share a sequence identical to that of the Italian outbreak, but without any history of travel to Italy or contact with other HAV cases. These cases had onset of illness in April 2013 in Ireland.

As the exposure of the cases occurred in Italy and Ireland, this suggests that cases have been exposed to the same contaminated vehicle of infection distributed in at least these two countries. Epidemiological, microbiological and environmental investigations indicate mixed frozen berries as the most likely vehicle of infection for these outbreaks.

In May 2013, following rapid alert system for food and feed (RASFF) notifications by Italian food authorities regarding HAV contamination found in a frozen berry mix originating in Italy, with raw berry material from Bulgaria, Canada, Poland and Serbia, the product was voluntarily withdrawn from the national market.

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ECDC assessment

Despite the withdrawal of the incriminated food product, it is likely that additional cases will be identified and reported in Italy and, possibly, in Ireland, because of the long shelf-life of such frozen products. ECDC invites Member States to raise awareness of a possible increase in HAV cases associated with the Italian outbreak strain, to report all new cases in EPIS-FWD, to use the common epidemic case definition and questionnaire to interview recent cases and to sequence a subset of viral specimens in order to disclose possible links with the current outbreak in Italy.

Actions

A joint ECDC-EFSA assessment was published on this outbreak on 29 May 2013 and updated on 9 July.

West Nile virus - Multistate (Europe) - Monitoring season 2013

Opening date: 3 June 2013 Latest update: 28 June 2013

Epidemiological summary

So far in 2013, no cases of WNF have been reported in EU Member States.

Outside the EU, eight cases have been reported in neighbouring countries to date (four cases in Russia and four cases in Israel).

On 31 May, the Astrakhanskaya oblast in Russia reported four laboratory-confirmed cases of WNV. The cases were reported in the city of Astrakhan (one), Volga region (two) and Kamyzyaksky district (one). Two of the cases are children aged 3-5 years. Two of the cases have recovered and been discharged from hospital.

On 20 June 2013, four cases were reported by Israel. The places of infection were the Central district (2), Haifa district (1) and Tel-Aviv district (1).

Websources: ECDC West Nile fever risk maps | ECDC West Nile fever risk assessment tool | Astrakhanskaya oblast| Israel MoH |

ECDC assessment

West Nile fever in humans is a notifiable disease in the EU. The implementation of control measures are considered important for ensuring blood safety by the national health authorities when human cases of West Nile fever occur. According to the EU blood directive, efforts should be made to defer blood donations from affected areas with ongoing virus transmission.

Actions

ECDC published a West Nile fever risk assessment tool on 3 July 2013.

ECDC produces weekly West Nile fever risk maps during the transmission season to inform blood safety authorities regarding affected areas.

Middle East respiratory syndrome- coronavirus (MERS CoV) - Multistate

Opening date: 24 September 2012 Latest update: 11 July 2013

Epidemiological summary

Between April 2012 and 11 July 2013, 81 laboratory-confirmed cases of MERS-CoV, including 45 deaths, have been reported worldwide.
To date, all cases have either occurred in the Middle East or have had direct links to an index case infected in the Middle East. Saudi Arabia has reported 66 cases, including 38 deaths, and Jordan two cases, both of which died. Thirteen cases have been reported from outside of the Middle East in: UK (4), Italy (3), France (2), Germany (2) and Tunisia (2). In France, Italy, Tunisia and the United Kingdom, there has been local transmission among patients who had not been to the Middle East but had been in close contact with laboratory-confirmed or probable cases. Person-to-person transmission has occurred both among close contacts and in healthcare facilities, but, with the exception of a nosocomial outbreak in Al-Ahsa, Saudi Arabia, secondary transmission has been limited. Eight asymptomatic cases were reported by Saudi Arabia in June of which four were healthcare

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workers.

Recently published modelling of MERS-CoV transmission in The Lancet indicates that the virus currently has a low potential for pandemic spread.

On 9 July, WHO set up an Emergency Committee concerning MERS-CoV in accordance with the International Health Regulations.

Web sources: ECDC RRA Update 17 June | ECDC novel coronavirus webpage | WHO | WHO MERS updates | InVS 25 june

ECDC assessment

The continued reporting of novel coronavirus cases by the Saudi Arabian authorities indicates an ongoing source of infection present in the Arabian Peninsula. There is therefore a continued risk of cases occurring in Europe associated with travel to the area. Surveillance for cases is essential, particularly with expected increased travel to Saudi Arabia for the month of Ramadan in July and the Hajj in October.

Actions

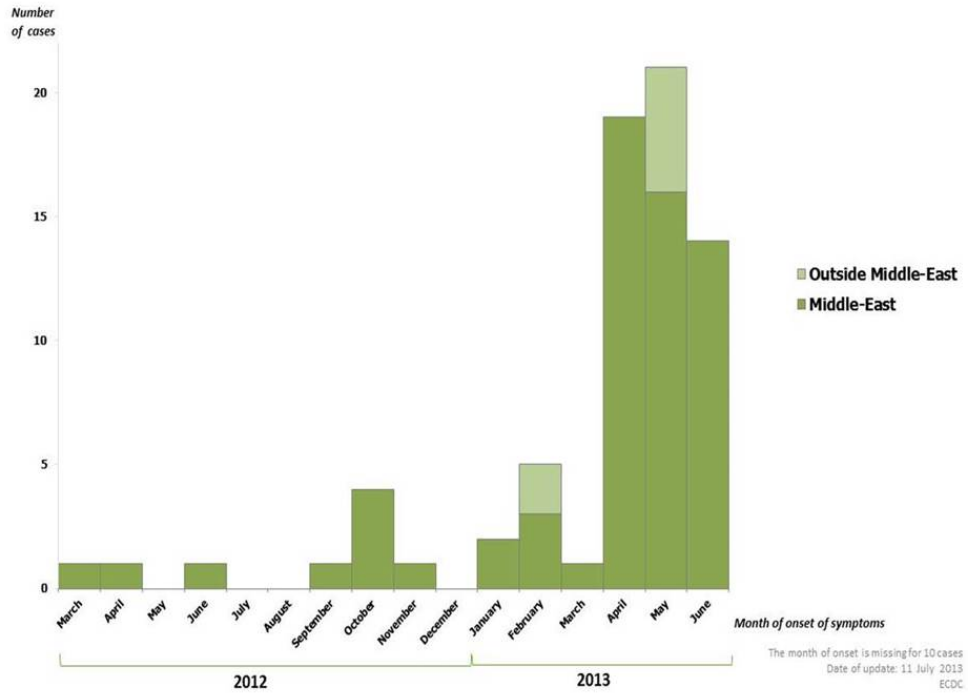
ECDC published a public health development article on 28 June 2013.

ECDC published an updated rapid risk assessment on 17 June 2013. The results of an ECDC-coordinated survey on laboratory capacity for testing the novel coronavirus in Europe were published in EuroSurveillance.

ECDC is closely monitoring the situation in collaboration with WHO and the European Union Member States.

Distribution of confirmed cases of MERS-CoV by month of onset of symptoms and probable place of infection, March 2012 - June 2013

ECDC



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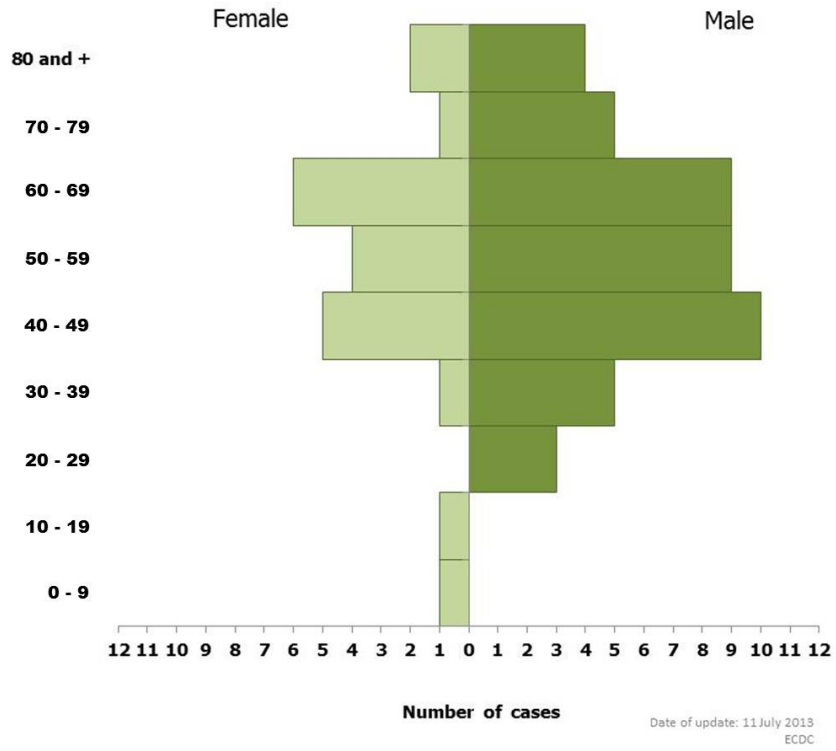
Distribution of confirmed cases (MERS-CoV), by age group and sex, March 2012 - June 2013

ECDC



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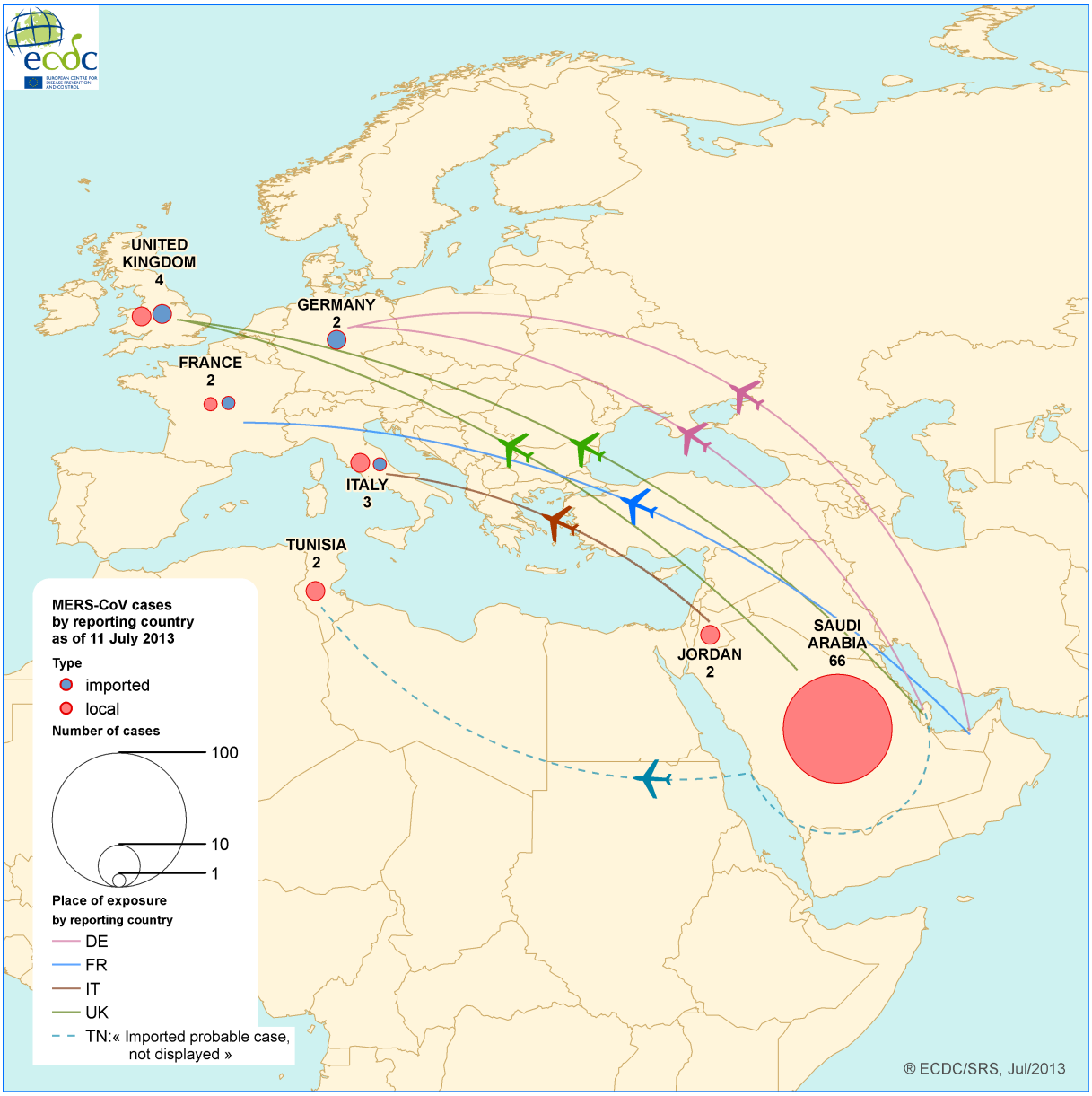
Distribution of confirmed cases (MERS-CoV) by place of reporting as of 12 July

ECDC



Dengue - Multistate (world) - Monitoring seasonal epidemics

Opening date: 20 April 2006 Latest update: 10 July 2013

Epidemiological summary

Asia: As of 26 of June, Laos, the Philippines and Singapore have reported more cases in 2013 than in 2012 for the same time period. A strong increasing trend is reported in Laos with 11 260 cases and 44 deaths reported. Singapore is experiencing a similar trend with 11 098 cases and two deaths reported. In Thailand, the number of dengue fever patients in the lower north-eastern provinces was four times higher in the first five months of 2013 than in 2012.

The Caribbean: Guadeloupe is experiencing an unexpected seasonal increase of dengue cases. DENV-1 is the main serotype circulating together with DENV-2 and DENV-4. A dengue outbreak is still on-going in Saint Barthelemy.

Central and South America: In Mexico, outbreaks are reported in four states with the co-circulation of DENV-1 and DENV-2. On 3 July, Nicaragua and Costa Rica both declared public health alerts related to an increase in dengue cases together with Honduras where the number of cases reached nearly 8 389, including 83 deaths, until the end of June. On 27 June, El Salvador declared a state of emergency with 9 164 suspected cases, 2 343 confirmed cases and one death.

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In South America, the dengue epidemic is decreasing in Ecuador and Colombia. Brazil is still affected by numerous outbreaks, notably in Mato Grosso State with 38 000 cases and 21 deaths reported to date. Both DENV-1 and DENV-2 are co-circulating. The overall number of dengue cases in Minas Gerai is the largest recorded with more than 200 000 confirmed cases and 94 deaths. All four serotypes are co-circulating. Paraguay has reported over 100 000 cases and 67 deaths. Most cases have occurred in the central region and in the city of Asuncion. However, the recent trend has been declining. In French Guiana, the dengue outbreak peaked at the end of June with 13 740 cases recorded. All four serotypes are circulating with a large predominance of DENV-2.

Africa: In Angola, the outbreak affecting Luanda Province is now declining, according to several media sources. Over 800 cases have been recorded and the last reported case was on 29 June. A dengue fever outbreak has been reported in Dar es Salaam, Tanzania, with 20 cases and five suspected deaths. In the Indian Ocean, Réunion has reported autochthonous sporadic cases of DENV-1 and DENV-3.

Web sources:
HealthMap | MediSys | ProMED Asia update| ProMED Americas update| WPRO|

ECDC assessment

ECDC monitors individual outbreaks, seasonal transmission patterns and inter-annual epidemic cycles of dengue through epidemic intelligence activities in order to identify significant changes in disease epidemiology. Of particular concern is the potential for the establishment of dengue transmission in Europe. Before the 2012 outbreak in the Autonomous Region of Madeira, local transmission of dengue was reported for the first time in France and Croatia in 2010. Imported cases are being detected in European countries, highlighting the risk of locally acquired cases occurring in countries where the competent vectors are present.

Actions

ECDC has published a technical report on the climatic suitability for dengue transmission in continental Europe and guidance for invasive mosquitoes' surveillance.

From week 28 onwards, ECDC will monitor dengue on a biweekly basis.

Novel cyclovirus - Multistate - central nervous system infections

Opening date: 19 June 2013

Epidemiological summary

An article published in mBio on 18 June 2013 described the identification of a novel cyclovirus, named CyCV-VN, in CSF specimens from two Vietnamese patients with CNS infections of unknown aetiology. Subsequently CyCV-VN was detected in 26 of 642 (4%) acute-infection CSF specimens (collected from 1999 to 2009), including 10 of 273 (3.7%) CSF specimens from patients with CNS infections of unknown aetiology and 16 of 369 (4.3%) samples from patients in whom laboratory-confirmed CNS infection with other pathogens was established. CyCV-VN DNA was also detected in 8 of 188 (4.2%) faecal specimens from healthy children. When specimens from poultry and pigs were tested, the virus was detected in 38 of the 65 specimens (58%).

Another article published online on 10 June 2013 in Emerging Infectious Diseases described the detection of cyclovirus in eight (15%) of 54 serum samples and 4 (10%) of 40 CSF samples from paraplegia patients in Malawi.

Web sources:
|mBio article | Emerging Infectious Diseases article |

ECDC assessment

This is the first time that cyclovirus has been associated with human infection. At this point, epidemiological data on cyclovirus infections and carriage in humans are very limited. Consequently, the risk for disease occurrence in humans cannot be assessed with any degree of accuracy until further studies are carried out.

Actions

ECDC published a rapid risk assessment on 8 July 2013.

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