



www.eurotravnet.eu

European Travel and Tropical
Medicine Network of the *International
Society of Travel Medicine*



*European Centre for Disease
Prevention and Control Collaborative
Network for Travel and Tropical
Medicine*



EUROTRAVNET SCIENCE WATCH : JANUARY 2010

Scientific Advances – A novel tetravalent dengue vaccine is well tolerated and immunogenic against all 4 serotypes in flavivirus-naive adults. Morrison D, Legg TJ, Billings CW, Forrat R, Yoksan S, Lang J. *J Infect Dis.* 2010 Feb 1;201(3):370-7.

Scientific Advances – Cardiovascular emergencies in cruise ship passengers. Novaro GM, Bush HS, Fromkin KR, Shen MY, Helguera M, Pinski SL, Asher CR. *Am J Cardiol.* 2010 Jan 15;105(2):153-7. Epub 2009 Dec 3.

Scientific Advances – Travel-related cerebro-meningeal infections: the 8-year experience of a French infectious diseases unit. Rapp C, Aoun O, Ficko C, Imbert P, Barruet R, Debord T. *J Travel Med.* 2010 Jan-Feb;17(1):1-7.

Scientific Advances – Epidemiology of travel-associated pandemic (H1N1) 2009 infection in 116 patients, Singapore. Mukherjee P, Lim PL, Chow A, Barkham T, Seow E, Win MK, Chua A, Leo YS, Cheng Chen MI. *Emerg Infect Dis.* 2010 Jan;16(1):21-6.

Scientific Advances – Imported chloroquine-resistant *Plasmodium vivax* in Singapore: case report and literature review. Lim PL, Mok YJ, Lye DC, Leo YS. *J Travel Med.* 2010 Jan-Feb;17(1):69-71.

Scientific Advances – A novel tetravalent dengue vaccine is well tolerated and immunogenic against all 4 serotypes in flavivirus-naive adults.

Morrison D, Legg TJ, Billings CW, Forrat R, Yoksan S, Lang J.
J Infect Dis. 2010 Feb 1;201(3):370-7.

Description: Sanofi Pasteur has developed a tetravalent dengue vaccine (TDV) against the world's most common arbovirus infection. The authors assessed the safety and immunogenicity of the TDV in healthy adults randomized into 2 groups. Group 1 received 3 TDV injections at months 0, 4, and 12-15; group 2 received saline placebo at month 0 and then 2 TDV injections at months 4 and 12-15. Adverse events were recorded, and biological parameters and viremia levels were measured. Neutralizing antibodies against 4 World Health Organization (WHO) reference strains were measured before and after vaccinations. A total of 33 participants were enrolled in each group. Demographic characteristics were comparable. No vaccine-related serious adverse event was reported. The most common systemic reactions were headache, malaise, and myalgia. Low viremia levels were detected, mainly of serotype 4. Immune response increased with successive vaccine doses. All participants seroconverted against all 4 serotypes after receiving 3 doses at 0, 4, and 12-15-months, and almost all seroconverted after 2 doses given 8-11 months apart. Sanofi Pasteur's TDV was well tolerated and induced full seroconversion against all WHO reference strain serotypes after 3 doses.

Link to the article

http://www.journals.uchicago.edu/doi/abs/10.1086/649916?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%3dnb.nlm.nih.gov

ECDC comment: 2010-02-01

Sanofi Pasteur's TDV was well tolerated and induced full seroconversion against all WHO reference strain serotypes after 3 doses.

Keywords : Dengue - Vaccine

This paper has been selected by Dr Philippe GAUTRET (philippe.gautret@club-internet.fr) from Marseille, France.

Scientific Advances – Cardiovascular emergencies in cruise ship passengers.
Novaro GM, Bush HS, Fromkin KR, Shen MY, Helguera M, Pinski SL, Asher CR.
Am J Cardiol. 2010 Jan 15;105(2):153-7. Epub 2009 Dec 3.

Description: The authors provide contracted cardiology consultations to several large cruise lines. They prospectively maintained a registry of all such consultations during a 2-year period. One hundred consecutive patients were identified (age 66 +/- 14 years, range 18 to 90, 76% men). The most common symptom was chest pain (50%). The most common diagnosis was acute coronary syndrome (58%; ST elevation in 21% and non-ST elevation in 37%). On-board mortality was 3%. Overall, 73% of patients required hospital triage. Of the 25 patients triaged to their institution, 17 underwent a revascularization procedure. One patient died. Ten percent of patients had cardiac symptoms in the days or weeks before boarding; all required hospital triage. Access to a baseline electrocardiogram would have been clinically useful in 23% of cases. In conclusion, CV emergencies, such as acute coronary syndrome and heart failure, are not uncommon on cruise ships. They are often serious, requiring hospital triage and coronary revascularization.

Link to the article

[http://www.ajconline.org/article/S0002-9149\(09\)02314-5/abstract](http://www.ajconline.org/article/S0002-9149(09)02314-5/abstract)

ECDC comment: 2010-02-01

More than 10 million people, many elderly and likely to harbor cardiovascular (CV) disease, embark on cruise ship travel worldwide every year. The clinical presentation and outcome of CV emergencies presenting during cruise ship travel remain largely unknown. A pretravel medical evaluation is recommended for passengers with a cardiac history or a high-risk profile. Passengers should be encouraged to bring a copy of their electrocardiogram on board if abnormal.

Keywords : Cruise – Cardiovascular disease

This paper has been selected by Dr Philippe GAUTRET (philippe.gautret@club-internet.fr) from Marseille, France.

Scientific Advances – Travel-related cerebro-meningeal infections: the 8-year experience of a French infectious diseases unit.

Rapp C, Aoun O, Ficko C, Imbert P, Barruet R, Debord T.

J Travel Med. 2010 Jan-Feb;17(1):1-7.

Description: During an 8-year period, the authors retrospectively collected data on all travelers hospitalized in their department for a cerebro-meningeal infection occurring during travel or in the month after their return. Fifty-six patients (35 men and 21 women; mean age 29 years (16-83); 44.6% tourists, 26.8% military, 16% immigrants, 12.5% expatriates) were included. The main destinations were Africa (57.2%), Europe (19.5%), and Asia (12.5%). The median duration of travel was 24 days (5-550). Symptoms occurred during travel in 20 patients (11 of which required a medical evacuation). In the remaining 36 patients, the median duration between return and clinical onset was 10 days. The median time from clinical onset to hospitalization was 4 days (0.5-96). Twenty-four patients presented with a meningeal syndrome and 20 others with encephalitic features. The remaining 12 patients had an incomplete clinical presentation (headaches or fever). The etiology was confirmed in 42 cases (75%) of which tropical diseases (n = 14) were less common than cosmopolitan ones (n = 28). Sub-Saharan Plasmodium falciparum malaria (n = 12) was the leading tropical infection, whereas viral infections (enterovirus, herpesviridae, HIV) were the main cosmopolitan etiologies. Only four bacterial infections were reported (Neisseria meningitidis, Mycoplasma pneumoniae, Brucella melitensis, Salmonella typhi). Sixteen patients were admitted to intensive care for a median time of 9.5 days (1-63). The average duration of hospitalization was 14 days (3-63). One death by herpes simplex virus 1 encephalitis was recorded. Four patients (7%) had neurological sequelae.

Link to the article

<http://www3.interscience.wiley.com/journal/122609135/abstract>

ECDC comment: 2010-02-01

Among the diversified etiological spectrum of CMI, cosmopolitan infections are widely predominant, particularly viral infections, followed by tropical causes, of which malaria is the leading disease in returnees from endemic areas. The diagnostic approach should be driven by history and physical examination. Key investigations include: blood smear, cerebrospinal fluid polymerase chain reaction and culture as well as neuro-imaging. Management should focus on curable causes.

Keywords : cerebro-meningeal infections – Travel - France

This paper has been selected by Dr Philippe GAUTRET (philippe.gautret@club-internet.fr) from Marseille, France.

Scientific Advances – Epidemiology of travel-associated pandemic (H1N1) 2009 infection in 116 patients, Singapore.

Mukherjee P, Lim PL, Chow A, Barkham T, Seow E, Win MK, Chua A, Leo YS, Cheng Chen MI.

Emerg Infect Dis. 2010 Jan;16(1):21-6.

Description

In June 2009, during Singapore's pandemic influenza plan containment phase, pandemic (H1N1) 2009 was introduced into the country through imported cases. To understand how travel patterns affected the initial outbreak, the authors examined epidemiologic and travel data for the first 116 case-patients admitted to Tan Tock Seng Hospital, Singapore, with travel-associated infection. Sixty-one percent and 54% of patients, respectively, met US Centers for Disease Control and Prevention and World Health Organization temperature criteria for influenza-like illness. One fourth of the case-patients traveled after illness onset, and 15% became ill while traveling. Regions of exposure for imported infections changed rapidly; case-patients initially arrived from North America, followed by Australasia and Southeast Asia. Case-patients on longer flights were more likely to become ill before arrival; those with shorter flights tended to become ill after arrival. Thermal scanners detected fevers in 12% of the arriving case-patients, resulting in a shorter time to isolation.

Link to the article

<http://www.cdc.gov/eid/content/16/1/21.htm>

ECDC comment: 2010-02-01

The monitoring of travelers fulfills a vital sentinel surveillance function, providing an early indicator of community transmission in countries even before transmission has been officially confirmed.

Keywords : H1N1 - Singapore

This paper has been selected by Dr Philippe GAUTRET (philippe.gautret@club-internet.fr) from Marseille, France.

Scientific Advances – Imported chloroquine-resistant *Plasmodium vivax* in Singapore: case report and literature review. Lim PL, Mok YJ, Lye DC, Leo YS. J Travel Med. 2010 Jan-Feb;17(1):69-71.

Description: Chloroquine-resistant *Plasmodium vivax* (CRPV) infection is emerging as a clinically significant problem. Detailed travel history is crucial to the management of imported malarial cases. The authors report a 58-year-old business traveler who returned from Indonesia and experienced relapse due to CRPV. The epidemiology and diagnostic challenges of CRPV for travel medicine clinicians are reviewed.

Link to the article

<http://www3.interscience.wiley.com/journal/122663013/abstract>

ECDC comment: 2010-02-01

CRPV is emerging as a clinically significant issue among travelers with imported malaria. Awareness of epidemiology and a detailed travel exposure are critically important to the recognition of CRPV. Mefloquine is an effective treatment for patients potentially infected with CRPV, and treatment strategies for *P. vivax* may eventually need to be reconsidered if CRPV becomes more widespread. Further research is needed to elucidate the mechanisms of resistance and to validate better prospective assays for chloroquine resistance.

Keywords : Chloroquine resistant *Plasmodium vivax* – Singapore

This paper has been selected by Dr Philippe GAUTRET (philippe.gautret@club-internet.fr) from Marseille, France.