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

EUROTRAVNET SCIENCE WATCH: OCTOBER 2010

Scientific advances – **Do HIV-Infected immigrants initiating HAART have poorer treatment-related outcomes than autochthonous patients in Spain? Results of the GESIDA 5808 Study.** Pérez-Molina J.A. et al., *Current HIV Research*, 2010, 8, 000-000

Scientific advances – **Severe imported Falciparum Malaria: a cohort study in 400 critically ill adults**. Bruneel F. et al. *Plos One*, October 2010, volume 5, issue 10, e13236

Leishmaniasis, an emerging infection in travelers. Pavli A. et al*., International Journal of Infectious Diseases* (2010), doi:10.1016/j.ijid.2010.06.019

Review – **Influenza in travellers**. Askling HH. and Rombo L. *Current opinion in Infectious Disease 2010, 23:421-425*

Scientific advances – **Short Report: Panton-Valentine Leukocidin-Positive *Staphylococcus aureus* Infections in Returning Travelers.** Dennis Tappe D., Schulze MH., Oesterlein A., Turnwald D., Müller A., Vogel U., Stic A. *American Journal of Tropical Medicine Hygiene.,* 83(4), 2010, pp. 748–750

This papers were selected by Pr Francesco Castelli (castelli@med.unibs.it) from Brescia, Italy

Scientific advances- **Do HIV-Infected immigrants initiating HAART have poorer treatment-related outcomes than autochthonous patients in Spain? Results of the GESIDA 5808 Study.**

Pérez-Molina JA., Rillo MM., Suárez-Lozano I., Casado Osorio JL., Teira Cobo R., González PR., Clotet EP., Jerez AH., Pedrol PD., Royuela A., Díaz EB., Esteban E., Gonzáles-García J.

***Current HIV Research*, 2010, 8, 000-000**

Link to the article: http://www.ncbi.nlm.nih.gov/pubmed/20946096

Description: A historical cohort study of 1105 naïve patients attending the HIV clinics of 33 Spanish hospitals, classified as immigrants (397 patients) or autochthonous (708 patients), was performed to compare the time to treatment failure (TTF) defined as virological failure, death, opportunistic disease, treatment discontinuation or missing patient. The multivariate analysis shows that response to HAART among immigrants and autochthonous patients is similar, although the median time to treatment failure is significantly shorter in immigrant women and the rate of losses to follow-up is higher among Sub-Saharan Africans.

ECDC comment: Response to antiretroviral therapy is similar in treatment-naïve HIV infected immigrants living in Spain and treatment-naïve HIV infected autochthonous patients. There are some more vulnerable groups, such as Sub-Saharan African or immigrant women, probably related to sociocultural and occupational factors that hinder access to health care. It is necessary develop measures to correct the factors that prevent some HIV-infected immigrant groups from taking advantage of HAART.

Public Health Significance: Sub-Saharan African and immigrants females may need particular measures to avoid barriers hindering antiviral efficacy. More efforts are needed to promote early-detection in immigrants.

Keywords: HIV, HAART, immigrants, autochthonous patients, treatment failure.

Scientific advances - **Severe imported Falciparum Malaria: a cohort study in 400 critically ill adults**.

Bruneel F., Tubach F., Corne P., Megarbane B., Mira JP., Peytel E., Camus C., Schortgen F., Azoulay E., Cohen Y., Georges H., Meybeck A., Hyvernat H., Trouillet JL., Frenoy E., Nicolet L., Roy C., Durand R., Le Bras J., Wolff M., Severe Imported Malaria in Adults (SIMA) Study Group.

Plos One, October 2010, Volume 5, Issue 10, e13236

Link to the article: http://www.ncbi.nlm.nih.gov/pubmed/20949045

Description: A retrospective review of severe *Plasmodium falciparum* malaria episodes, defined according to the 2000 World Health Organization definition and requiring admission to intensive care unit. From 2000 to 2006, 400 adults were admitted in 45 French intensive care units: 60% of patients were white, 96% acquired the disease in sub-Saharan Africa and 65% had not taken anti-malarial chemoprophylaxis. Quinine treatment was used in 97% of patients and intensive care unit mortality was 10.5% (42 deaths). Three variables independently predicted death: older age, coma and higher parasitemia.

ECDC comments: This is one of the largest studies of severe imported falciparum malaria in adults managed in a non-endemic country with high-level, intensive-care facilities. It provides useful insight on disease outcomes and variables contributing to mortality. These results should prove useful to clinicians managing severe malaria patients in the ICU, as well as the epidemiologist and public health practitioners. They may help to provide recommendations for intensive care physicians, especially in countries where imported malaria is uncommon.

Public Health Significance: Severe imported malaria still carries a high mortality rate, which is estimated at 10% to 15%. The strongest predictors of death at ICU admission were older age, neurological impairment and high parasitaemia. Patients with these factors may require the highest level of treatment intensity. In this study, 65% of patients had not taken antimalarial chemoprophylaxis. Travelers need to become aware of the importance of the pre-travel encounter. As artesunate is associated with lower mortality and better tolerability compared to quinine it is important to increase the availability of parenteral artesunate in Europe to improve survival rates in patients with severe imported malaria.

Keywords: severe malaria, predictors of death, intensive care unit, pre-travel encounter.

Scientific advances – **Leishmaniasis, an emerging infection in travelers**

Pavli A., Maltezou HC.

International Journal of Infectious Diseases (2010), doi: 10.1016/j.ijid.2010.06.019

Link to the article: http://www.ncbi.nlm.nih.gov/pubmed/20952234

Description: A review of the recent literature indicates a sharp increase in imported leishmaniasis cases in developed, non-endemic countries over the last decade, in association with increasing international tourism, military operations and immigration from endemic countries. South America is the main area for the acquisition of cutaneous leishmaniasis and Mediterranean destinations are emerging as the main areas of acquisition of visceral leishamaniasis for European travelers. Information about clinical manifestations, diagnosis, treatment and prevention are detailed in the text. The widespread emergence of resistance to pentavalent antimonials in India is highlighted.

ECDC comment: Imported leishmaniasis is an uncommon but emerging infectious disease among international travelers. In developed, non-endemic countries physicians need to improve their knowledge about the clinical spectrum, the diagnostic modalities and available treatment options. Appropriate counseling should be provided to adventure travelers, military personnel, researchers and other groups of travelers likely to be exposed to sandflies in endemic areas.

Public Health Significance: It is important for clinicans seeing returned travelers to be aware of leishmaniasis as an emerging infectious disease, to know the clinical manifestations of the disease and when to suspect it. Leishmaniasis should be considered in travelers with compatible clinical findings and a history of travel to an endemic area, even if months or years have elapsed. Travel health advisors need to highlight the importance of the pre-travel encounter and to provide information about appropriate protective measures to travelers likely to be exposed to sandflies. Furthermore, due to global warming, we are witnessing the spread of *Leishmania* vectors so increased public health efforts are needed to improve knowledge among physicians and to create a partnership between human medicine and entomological monitoring.

Key words: leishmaniasis, emerging infectious disease, travelers, counseling, sandflies.

Scientific advances – **Influenza in travellers**

Askling HH., Rombo L.

Current opinion in Infectious Disease 2010, 23:421-425

Link to the article: http://www.ncbi.nlm.nih.gov/pubmed/20717029

Description: A review of articles in the field of influenza in travelers among those published within the past 18 months. The incidence of influenza in returning febrile travellers from subtropical and tropical regions is between 5% and 15% with no significant differences between those vaccinated and not vaccinated in the reviewed studies. Air transportation is the key factor for the spread of influenza also if travel restrictions seem to not be able to contain outbreaks and to prevent further international spread.

ECDC comment: The spread of influenza by travellers still remains to be further studied. Influenza should always be considered in febrile travelers with or without respiratory symptoms. Future studies on the incidence of travel-related influenza should consider the short incubation period for a better estimate. Vaccine from the opposite hemisphere should be available for travellers and influenza vaccine studies should focus on elderly and immunocompromised patients.

Public Health Significance: This paper is useful in helping to understand the role of travellers in the spread of influenza. It highlights some recommendation to avoid the infection. Travellers going on cruise ships and travellers to major events (with large numbers of congregated persons) are considered at risk and are recommended to be vaccinated. The availability of hemisphere specific vaccines is a subject for discussion and policy lAir travel of febrile patients should be discouraged.

Keywords: influenza, travellers, vaccination

Scientific advances - **Short Report: Panton-Valentine Leukocidin-Positive *Staphylococcus aureus* Infections in Returning Travelers.**

Dennis Tappe D., Schulze MH., Oesterlein A., Turnwald D., Müller A., Vogel U., Stic A.

American Journal of Tropical Medicine Hygiene., 83(4), 2010, pp. 748–750

Link to the article: http://www.ncbi.nlm.nih.gov/pubmed/20889859

Description: Skin and soft tissue infections caused by Panton-Valentine leukocidin-producing strains of *Staphylococcus aureus* are emerging among travelers returning from the tropics. In the study, data on 15 patients, seen from December 2005 to March 2010 in a travel clinic in Würzburg (southern Germany) returning from tropical and subtropical areas with skin and soft tissue infections caused by PVL-producing *S. aureus* are analysed. Intrafamiliar spread was documented in one case, and occupational secondary transmission was assumed in another. *Spa* typing of the strains revealed a broad spectrum of variants, but some were clonally related. Methicillin-resistant *Staphylococcus aureus* (MRSA) was found in three cases. The true incidence of this condition is presumably much higher as many travelers do not necessarily visit the travel clinic.

ECDC comment: Skin and soft tissue infections caused by Panton-Valentine leukocidin-producing strains of *Staphylococcus aureus* are emerging among travelers returning from the tropics. In a patient with a history of rapid evolving and recurrent dermal abscesses, physicians should suspect a PVL-producing *S.aureus* and culture followed by antimicrobial testing should be performed.
Future prospective studies should address the prevalence of PVL positive *S. aureus* in returning travellers compared with the endemic PVL prevalence, and also in certain groups of travellers (i.e., budget versus luxury travel). Moreover, risk factors for the acquisition of PVL-producing *S. aureus* should be specified.

Public Health Significance: Travellers returning from the tropics with a history of rapid evolving and recurrent dermal abscesses should consult a travel clinic. With a diagnosis of PVL positive *S.aureus* prompt antibacterial chemotherapy should be initiated if clinically indicated, and patients should receive appropriate personal hygiene instructions to prevent recurrences and family or community secondary spread.

Keywords: leukocidin, MRSA, travel.