EPI-NEWS

NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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MALARIA 2009

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In 2009, a total of 54 imported malaria cases were notified by Danish laboratories, Table 1. Among the cases for which the presumed country of infection was stated, 96% (48/50) had been acquired during stays in Sub-Saharan Africa and 4% (2/50) during stays in Asia. Among the cases with a strain-specific diagnosis, 82% were caused by Plasmodium falciparum, among which the overwhelming majority (93%) were acquired in Africa. The two Asian malaria cases were caused by P. vivax. The median age was 37 years (range 12 to 63). Males comprised 65%, females 35%. About 1/3 of the cases occurred among Danish travellers, while 2/3 occurred among travellers of non-Danish origin.

Table 1. Malaria cases imported to Denmark, 2009

	Africa	Asia	Central & South America	Oceania	Not stated *)	Total 2009	Total 2008
P. falciparum	41	0	0	0	3	44	75
P. vivax	0	2	0	0	0	2	11
P. ovale	2	0	0	0	1	3	2
P. malariae	4	0	0	0	0	4	2
Mixed	1	0	0	0	0	1	1
Not stated	0	0	0	0	0	0	0
Total	48	2	0	0	4	54	91

*) Including travellers to more than one continent

Commentary
The number of notified malaria cases in 2009 was the lowest recorded since 1983 when the notification system acquired its present form. Consequently, the number of malaria cases imported to Denmark has been reduced by 75% in the past decade. The main problem remains falciparum malaria in Africa, while only a limited number of cases were imported from Asia and none from the remaining continents. The recorded trend is in line with that observed in several other European countries and also supports data suggesting a general decrease in the malaria risk in many parts of Asia and South America, as well as in Africa. Developments are described in more detail in the WHO World Malaria Report 2009, www.who.int.
(L.S. Vestergaard, H.V. Nielsen, Dept. of Microbiol. Surv. & Research)

REVISED RECOMMENDATIONS FOR MALARIA PROPHYLAXIS
As in the previous four years, a reference group has revised and updated the SSI's country-specific recommendations for malaria prophylaxis prior to travels abroad. In 2010 the following changes apply:
Columbia: **x** in gr. 2-4
India, South (incl. Goa) and North: **V** in gr. 1-4
India, central and NE: **X** in gr. 2-4
Nepal: **v** in gr. 2-4
Sri Lanka: **x** in gr. 2-4
Tadsjikistan: **v** in gr. 2-4, month 6-10
Haiti: **X** in gr. 1-4
In countries marked with a small letter, the malaria risk only applies in part of the territory.

Mosquito bite prophylaxis
It is essential to inform all travellers that mosquito bite prophylaxis from sunset to sunrise is always important, regardless of any concurrent use of chemoprophylaxis.
When used during the daytime, mosquito repellent also provides significant protection against other mosquito-transferred diseases such as dengue and chikungunya fever, which are transferred by daytime mosquitoes.
Permethrin-impregnated mosquito nets are currently not available in Denmark, as the Environmental Protection Agency has prohibited their sale. The reference group is discussing possible solutions with the Environmental Protection Agency. Until a solution has been identified, unimpregnated nets should be used as they provide better protection than no net at all. Permethrin is authorised for marketing in most of the world, incl. Sweden and Norway.

Changed chemoprophylaxis levels
The number of chemoprophylaxis levels has been changed, as the general recommendation on concurrent use of chloroquine and proguanil (Paludrine) was discontinued for some countries. Paludrine was deregistered, but is still available, subject to a special permit from the Danish Medicines Agency, EPI-NEWS 48/07. Concurrent administration will therefore remain an option in special risk groups, e.g. childbearing women and infants.
Any new Danish recommendations issued will comprise the following three levels:
I) Mosquito bite prophylaxis alone
II) I + Chloroquine
III) I + Atovaquon/proguanil (Malarone), mefloquine (Lariam) or doxycycline (Vibradox).
The level III preparations are considered equally efficacious.
For areas outside Africa with a more limited malaria incidence, "standby" treatment may be considered, i.e. no regular administration of chemoprophylaxis, but handing out a quality assured malaria pharmaceutical which may be used for self-treatment in case the traveller falls ill with malaria during the journey.

Goa: Chemoprophylaxis termination
Following several cases of falciparum malaria imported to Europe from Goa, India, during the winter of 2006/7, a recommendation on pharmacological prophylaxis to travellers visiting Goa was introduced, 1-2/07. It is estimated that the increased risk is no longer relevant, and consequently chemoprophylaxis is not considered necessary. Travellers may bring "standby" treatment, if preferred.

Pregnancy and children
Child-bearing women and children comprise a malaria risk-group and it is challenging to ensure a safe and effective prophylaxis in these groups. Generally, child-bearing women are advised to avoid travelling to areas with chloroquine-resistant falciparum malaria.
Mosquito bite prophylaxis can and should be used throughout pregnancy.
Chloroquine may be used alone or concurrently with proguanil during the entire pregnancy, but will not provide optimal effect against chloroquine-resistant falciparum malaria.
Mefloquine may be used in the second and third semesters. Due to slow excretion, pregnancy should be avoided for three months after administration of the final dose.
Doxycyklin may, in theory, be given during the first semester, but is still considered contraindicated. Malarone cannot be administered due to lack of experience.
Chemoprophylaxis in young children requires careful consideration; see EPI-NEWS 19/05.
(M. Buhl, Society of Travel Medicine, S. Thybo, Society for Inf. Diseases, J. Kurtzhals, Society for Clin. Microbiology, N.E. Møller, College of GPs, L.S. Vestergaard, Society for Tropical Medicine & Int. Health, K. Gade, Paediatric Society, P.H. Andersen, Dept. of Epidemiology)

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Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2010 figures are preliminary)

Table 1	Week 23 2010	Cum. 2010 [1]	Cum. 2009 [1]
AIDS	1	23	14
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	6	4
Diphtheria	0	0	0
Food-borne diseases	19	122	187
of these, infected abroad	3	32	31
Gonorrhoea	5	241	256
Haemorrhagic fever	0	0	0
Hepatitis A	1	16	10
of these, infected abroad	1	8	5
Hepatitis B (acute)	1	16	15
Hepatitis B (chronic)	2	91	83
Hepatitis C (acute)	0	0	2
Hepatitis C (chronic)	10	190	152
HIV	0	112	121
Legionella pneumonia	4	44	51
of these, infected abroad	3	10	8
Leprosy	0	0	0
Leptospirosis	0	0	0
Measles	0	2	9
Meningococcal disease	1	30	42
of these, group B	0	15	23
of these, group C	0	9	16
of these, unspec. + other	1	6	3
Mumps	0	5	8
Neuroborreliosis	2	9	3
Ornithosis	0	7	1
Pertussis (children < 2 years)	1	37	54
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	1	4
Listeria monocytogenes	2	5	4
Streptococcus pneumoniae	0	45	51
Other aethiology	2	14	7
Unknown aethiology	1	12	11
Under registration	1	1	0
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	4	42	45
of these, infected abroad	3	30	36
Syphilis	9	179	122
Tetanus	0	0	0
Tuberculosis	17	173	170
Typhoid/paratyphoid fever	0	19	11
of these, infected abroad	0	17	10
Typhus exanthematicus	0	0	0
VTEC/HUS	6	63	49
of these, infected abroad	2	17	11

[1] *Cumulative number 2010 and in corresponding period 2009*

Selected laboratory diagnosed infections

Number of specimens, isolates, and/or notifications received in SSI laboratories

Table 2	Week 23 2010	Cum. 2010 [3]	Cum. 2009 [3]
Bordetella pertussis (all ages)	3	63	79
Gonococci	5	205	190
of these, females	2	56	43
of these, males	3	149	147
Listeria monocytogenes	1	23	34
Mycoplasma pneumoniae			
Resp. specimens [3]	3	48	31
Serum specimens [4]	1	94	62
Streptococci [5]			
Group A streptococci	2	86	86
Group B streptococci	3	55	50
Group C streptococci	2	30	14
Group G streptococci	6	80	74
S. pneumoniae	18	589	641
Table 3	**Week 21 2010**	**Cum. 2010 [2]**	**Cum. 2009 [2]**
MRSA	17	322	271
Pathogenic int. bacteria [6]			
Campylobacter	79	920	741
S. Enteritidis	5	100	131
S. Typhimurium	9	191	382
Other zoon. salmonella	13	251	275
Yersinia enterocolitica	10	83	106
Verocytotoxin-producing E. coli	1	61	50
Enteropathogenic E. coli	0	62	55
Enterotoxigenic E. coli	5	168	99

[2] *Cumulative number 2010 and in corresponding period 2009*

[3] *Resp. specimens with positive PCR*

[4] *Serum specimens with pos. complement fixation test*

[5] *Isolated in blood or spinal fluid*

[6] *See also www.germ.dk*

Sentinel surveillance of the influenza activity

The 2009/2010 sentinel surveillance ended by week 20