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Health Service Executive

MIDAS
Midland Infectious Disease Activity Summary

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Meningitis still prevalent in Ireland

The slight increase in the number of meningococcal disease cases over the past year has served as a reminder that the disease continues to be prevalent in Ireland.

Since the introduction of the Men C vaccine in 2000, rates of invasive meningococcal disease (IMD) have decreased dramatically from 203 cases in 2005 to 66 in 2012, with a slight increase to 82 in 2013.

Risk Factors

Infants have the highest rate of meningococcal disease, followed by adolescents and young adults.

Underlying immune deficiencies, living in crowded conditions, low socio-economic status, active or passive exposure to tobacco smoke and concurrent respiratory tract infections are all associated with increased risk of acquiring the disease.

Traveller Population

A recent outbreak investigation report also highlighted that Irish Travellers have higher rates of IMD than the general population[1].

It is thought that large family size, young age of the population and close social encounters (all features of the Irish Traveller Community) may be some of the reasons for the increased risk.

Symptoms

The classic features of IMD include sudden onset of fever, headache and stiff neck followed by a haemorrhagic rash. A recent study identified five "red flag symptoms" for early septicaemia in meningococcal disease[2] :

- confusion - rash - photophobia
- leg pain - neck pain/stiffness

Pre-hospital Management

Early administration of **Benzylpenicillin** in primary care for suspected septicaemia/meningitis has been proven to reduce mortality.

Benzylpenicillin should be withheld only if an individual has a proven history of penicillin anaphylaxis. In the extremely rare case of history of anaphylactic reaction to penicillin, the highest priority is to get the patient to hospital.

Doses of antibiotic for suspected cases

Benzylpenicillin (ideally IV but can be given IM if unable to get IV access):

- Adults or children aged 10 years or over: 1200 mg
- Children aged 1-9 years: 600 mg
- Children aged < 1 year: 300 mg

Alternative to benzylpenicillin if available:

- Ceftriaxone 80 mg/kg (up to 2g) IM or IV (all ages)

Or

- Cefotaxime 50 mg/kg (up to 2g) IM or IV (all ages)

Contacts of cases of Meningitis

Approximately 10% of the population have nasopharyngeal carriage of meningococci with no signs or symptoms of disease. Spread is via respiratory and throat secretions.

Contrary to popular belief, a patient with meningococcal disease is not an efficient transmitter of the meningococcus that is causing their illness. Instead it is the carrier who transmitted the organism to the patient in the first instance who is much more likely to transmit the meningococcus again and cause further cases.

Chemoprophylaxis aims to reduce the risk of invasive disease by eradicating carriage in the group of close contacts at highest risk.

It may act in two ways: (i) by eradicating carriage from established carriers who pose a risk of infection to others and (ii) by eradicating carriage in those who have newly acquired the invasive strain and who may themselves be at risk. **Therefore chemoprophylaxis is only indicated for household contacts**, intimate kissing contacts and, following a risk assessment, contacts in a crèche or pre-school type environment.

Although the risk to contacts is low, if prophylaxis is not given the absolute risk to an individual in the same household of developing meningococcal disease within 30 days after the index case is about one in 300.

Following a notification of meningitis, Public Health Doctors will make contact with the index case or family and identify the appropriate contacts and arrange for chemoprophylaxis.

Prevention

Men C vaccine

The meningococcal group C conjugate (MenC) vaccine was introduced into the infant immunisation schedule in Ireland in October 2000.

This vaccine is given to children at 4, 6 and 13 months of age. One dose is also recommended for all those less than 23 years of age who are unvaccinated.

Conjugate Meningococcal ACW135Y vaccine (MenACWY)

Two conjugate MenACWY vaccines (Menveo and Nimenrix) are available for those at risk of exposure to N. meningitidis groups A, C, W and Y. (See National Immunisation guidelines for details).

Meningitis B Vaccine

Recently a new vaccine against meningococcal B disease (brand name Bexsero) was authorised by the European Medicines Agency. The National Immunisation Advisory Committee is currently considering whether to incorporate it into the routine childhood immunisation schedule. The vaccine is therefore not available from the cold chain but can be ordered privately from the vaccine supplier.

The vaccine company recommends the following schedule:
–Under 6 months of age - 3 doses + a booster between 12 & 23 months
–If over 6 months but under 2 yrs of age - 2 doses and a booster.
–Over 2 years of age - 2 doses & uncertain of the need for booster.

Please check the SPC for the most up-to-date information available at www.ema.europa.eu

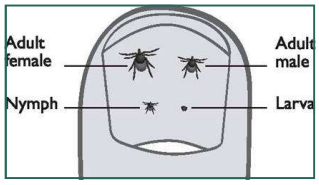
Further information about Meningitis can be found at www.hpsc.ie/A-Z/VaccinePreventable/BacterialMeningitis/

Contents

Lyme Disease Awareness

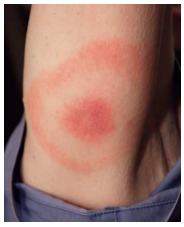
As it is tick biting season we wish to draw your attention to Lyme disease and the tiny insect that causes it!

What is the cause of Lyme disease?



- Lyme disease (also known as Lyme borelliosis) is an infection caused by a spiral-shaped bacterium called *Borrelia burgdorferi*.
- This bacterium is transmitted to humans by bites from infected ticks.
- The ticks (Ixodidae) can be carried by a wide range of mammals including deer, sheep and cows; their tiny size means they can be difficult to find on the skin.
- Ticks generally have to be attached for a number of hours before passing on the infection, so rapid removal of ticks is important.

What are the symptoms of Lyme disease?



- When infected with *Borrelia* many people have no symptoms at all.
- The commonest feature is a rash - ***erythema migrans*** - seen in about three-quarters of patients.
- This rash generally develops between 3 days and a month after a tick bite. It can last up to a month and be several inches in diameter.
- As may be seen from the photo, the rash has a characteristic “bull’s eye” appearance.
- People can also complain of 'flu-like symptoms such as headache, sore throat, neck stiffness, fever, muscle aches and general fatigue.
- Occasionally, there may be more serious complications involving the nervous system, joints, the heart or other tissues.

Who is at risk?

- Ramblers, campers and those who work in woodland and grassy areas are at greatest risk of being bitten by ticks and of going on to develop disease.
- Lyme disease can occasionally be carried by pet dogs, especially if they have been walked in areas with a lot of ticks.

How can Lyme disease be prevented?

- The very best way to **prevent Lyme disease** and its complications is to **prevent tick bites**.
- The HPSC has a number of resources to assist the general public in identifying ticks, the types of habitat they are most likely to be found in and steps necessary to protect oneself and one’s family.

How to avoid tick bites when out in the countryside:

- Wear long trousers, long sleeved shirt and shoes
- Consider using an insect repellent
- After your day out in the country, check skin, hair and warm skinfolds (especially the neck/ scalp of children)
- If you find a tick, remove it - consult your GP if symptoms develop

What to do if bitten by a tick:

- Only a minority of ticks carry infection. If removed within a few hours, your risk of infection is low
- Remove the tick (with tweezers) by gripping it close to the skin
- After removal, wash the area with soap and water
- Make sure to remove any mouthparts with the tweezers
- Over the next few weeks check the area for swelling/redness
- If a rash/other symptoms develop, see your GP and report the tick bite

Further information:

- Further information on Lyme disease can be found at http://www.hpsc.ie/A-Z/Vectorborne/LymeDisease/

Acknowledgements:
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Images:
From www.hpsc.ie:
– Relative sizes of the different stages of development of *Ixodes* ticks on a human thumbnail - courtesy of HPA
– Typical *erythma migrans* rash with characteristic "bullseye" appearance - courtesy of CDC/ James Gathany
– Be Tick Free *and* Tick bites and Lyme Disease - courtesy of HPSC - HSE
From www.dreamstime.com:
– *Tick isolated on white* © Sergeytoronto

WHO declares spread of Polio a *Public Health Emergency of International Concern*

On May 5th the WHO declared the spread of polio a global public health emergency which, if left unchecked, could derail efforts to eradicate the disease. Of concern is the cross-border spread of the disease – from Pakistan to Afghanistan, from Syria to Iraq, and from Cameroon to Equatorial Guinea, which is also battling an outbreak of the Ebola virus.

Exportation of polio virus from a polio-infected country to a polio-free country with poor vaccination uptake could result in large outbreaks that would jeopardize the polio eradication goal.

In light of these concerns temporary polio vaccination recommendations were issued by WHO. These require polio-infected countries (see box below) to ensure or encourage that people leaving these countries have been vaccinated against polio in the last 12 months.

States currently exporting wild poliovirus - greatest risk !!	States infected with wild poliovirus but not currently exporting - ongoing risk	
* Pakistan * Cameroon * Syria	* Nigeria (particularly) * Equatorial Guinea * Iraq * Somalia	* Afghanistan * Ethiopia * Israel

Recommended actions for GPs and travel health clinics

1. *Travel vaccination – WHO recommends:*
   - IPV booster vaccination for travellers to areas where polio virus transmission is occurring.
   - Individuals travelling to these countries should be given the ***International Certificate of Vaccination or Prophylaxis*** *- specifying the vaccine, date of administration and signature of clinician.* This certificate is the same as that used for Yellow Fever vaccination. The booklet can be downloaded at www.who.int/ihr/ports_airports/icvp_note/en/
   - Travellers to **Pakistan, Cameroon, Syria**, if staying > 4 weeks, **must** show documentation of IPV or OPV vaccination within the past 12 months when leaving these countries.

2. *Vaccine supply*
   - Inactivated polio vaccine (IPV) is the only polio vaccine used in Ireland.
   - Vaccines for travel are not provided through national cold chain.

2014 World Cup in Brazil: Health advice for travellers

The European Centre for Disease Control and Prevention has advised that visitors from the EU to the 2014 World Cup in Brazil will be most at risk of gastrointestinal illness and vector-borne infections. Therefore, they should:

- pay attention to standard hygienic measures to reduce the risk of gastrointestinal illness
- protect themselves against mosquito and other insect bites by using insect repellent and/or wearing long-sleeved shirts and trousers
- take malaria chemoprophylaxis and be vaccinated against yellow fever, if travelling to areas at risk of these diseases

Travellers should check that they are up-to-date with their own vaccinations (as per Irish guidelines) and those advised by health authorities in Brazil, in particular hepatitis A (intermediate endemicity in Brazil).

Unprotected sexual contact should be avoided.

Image from www.fifa.com

HSE Midland Area reaches >95% uptake for all vaccines at 12 months

Congratulations to all the GPs and Practice Nurses in the Midlands for yet again achieving the immunisation target uptake of >95% for children aged 12 months.

It is the second year running that the Midlands Area has reached this target and we are consistently one of the best performers when compared to other HSE areas.

This fantastic achievement reflects all the hard work by Practice Nurses and GPs.

Credit is also due to Eileen Kinsella, Regional Immunisation Co-ordinator (Midlands), Karen Nugent, her assistant - for their liaison work with the practices and following up with defaulters - and to administration staff and PHNs.

The uptake rates at 24 months have also improved with the PCV3 at 95% and the Men C3 very close to the target at 94%. Hopefully encouraging parents to adhere to the schedule *and* targeting the 13 month visit for Hib Booster and Men C (by giving parents this appointment at the 12 month visit) will further improve uptake, as will following up on all defaulters.

List of Infectious Diseases notified in HSE Midland Area - 01/01/2014 to 01/06/2014*

Disease	Number	Disease	Number
Campylobacter infection	85	Meningococcal disease	4
Chickenpox - hospitalised cases	1	Mumps	4
Chlamydia trachomatis infection	90	Noroviral infection	22
Clostridium difficile infection	35	Respiratory syncytial virus infection	90
Cryptosporidiosis	24	Rotavirus infection	85
Dengue fever	1	Salmonellosis	10
Giardiasis	4	Streptococcus group A infection (invasive)	1
Gonorrhoea	5	Streptococcus group B infection (invasive)	2
Haemophilus influenzae disease (invasive)	1	Streptococcus pneumoniae infection (invasive)	11
Hepatitis A (acute)	1	Syphilis	2
Hepatitis B (acute and chronic)	11	Toxoplasmosis	1
Hepatitis C	7	Trichomoniasis	3
Herpes simplex (genital)	9	Tuberculosis	6
Human immunodeficiency virus infection	4	Verotoxigenic Escherichia coli infection	24
Influenza	60	Viral meningitis	6
Leptospirosis	1		

** All data are provisional*

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Please note some data are provisional and subject to amendment

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References:
1. *Cotter S, O'Connor L, O'Lorcain P, Flanagan P, O'Flanagan D , on behalf of the Outbreak Control Team (OCT) .* Meningococcal disease in Ireland 2005-2013 – can determinants of increased risk be identified? *Epi-Insight Vol 15, Issue 3, mar 2014*
2. Haj-Hassan TA, Thompson MJ, Mayon-White RT *et al.* Which early 'red flag' symptoms identify children with meningococcal disease in primary care? *British Journal of General Practice*, March 2011 Vol 61, No 584

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