EPI-INSIGHT

IONAD NAISIUNTA FAIRE GALAIR

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IN THE NEWS

Cases of Acute Respiratory Infection with Myocarditis and Pericarditis in Greece, April 2002.

A nationwide investigation was launched in Greece on the 15th April 2002, following reports of three unexpected deaths in young and middle-aged women.[1] The first death occurred on 5th April in a previously healthy 45-year old woman. The death was associated with myocarditis following an acute upper respiratory tract infection. A second death of a 48-year old woman with similar symptoms occurred on 13th April. The symptoms included fever, cough and malaise with a particularly prominent myalgia. This was followed by chest pain, dyspnoea and later, cardiac failure and cardiogenic shock. A 32-year old woman died on 15th April from myocarditis after a respiratory tract infection. Several other reports of non-fatal cases of myocarditis or pericarditis after upper respiratory tract infection (URTI) were received by the Hellenic Centre for Infectious Disease Control.

Investigations included retrospective and prospective surveillance of URTIs from around the country, syndrome reporting of myocarditis/pericarditis preceded by URTI, and laboratory studies of blood, nasopharyngeal swabs and stool specimens collected from reported cases. Hospitals were alerted about the syndrome, advice was issued on personal hygiene and schools were closed three days early for the Easter holiday.

As of May 1st 2002, 53 cases of possible myocarditis/pericarditis following suspected viral infection have been reported. The numbers admitted to hospital peaked around 19-22 April and declined thereafter. Cases were reported from all parts of the country. However, there were no reported cases in visitors to Greece. Thirty (57%) of cases were male and 23 (43%) were female. The age distribution of cases is shown in Figure 1.

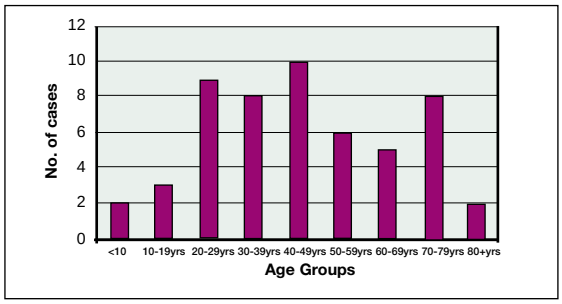

Figure 1. Distribution of cases by age group.

Investigations showed no evidence of an increase in URTIs. However, there was an increase in cases of myocarditis/pericarditis preceded by URTI in April. Laboratory findings for several patients revealed the presence of enteroviruses, and enterovirus antigen was detected in the cytoplasm of cardiac tissue cells from one of the deceased. The enterovirus isolated from one of the patients has been identified as coxackievirus. Although the situation appears stable, surveillance is continuing.

Reference

1. Panagiotopoulos T et al. Update – cases of acute respiratory infection with myocarditis and pericarditis in Greece. *Eurosurveillance Weekly*, [Serial online] 2002 [cited, 3 May 2002] **18**. Available at http://www.eurosurv.org/2002/ 020503.htm#top

Botulism in Injecting Drug Users

Since March of this year three cases of suspected wound botulism have been reported in injecting drug users in Ireland; two in Dublin and one in Cork. Two of the cases have since been confirmed. The first case presented on 14th March 2002 with pseudo-bulbar palsy, paralysis and respiratory difficulty.[1] The other two cases presented in late April with neurological symptoms consistent with botulism. All received anti-toxin and are recovering (supplies of anti-toxin are available from Cherry Orchard Hospital).

The A&E departments of acute hospitals, drug treatment centres, and general practitioners and pharmacists who prescribe and dispense methadone were alerted. A national and international alert was also sent out.

In suspected wound botulism the appropriate clinical specimens are as follows:

- Serum. At least 10ml samples which must be taken before antitoxin is given.
- Wound. As much pus as possible in a sterile container. If pus is not available, a swab of the lesion should be taken and put immediately into a transport medium for anaerobic culture. If surgical debridement is performed, biopsy tissue should be placed immediately into a sterile container. All samples should be refrigerated prior to laboratory transfer and the laboratory must be informed prior to the specimens being taken.

The PHLS guidance on obtaining appropriate clinical specimens can be found at www.phls.org.uk/facts/botulism/botulism_guidelines.pdf.

Five cases, three confirmed and two suspected, have been reported in the UK in the past six months.[2] No link has been established between the Irish and UK cases.

References

1. Barry J, Thornton L. Case of botulism in Ireland. *Eurosurveillance Weekly*, [Serial online] 2002 [cited, 28 March 2002] **13**. Available at http://www.eurosurv.org/2002/020328.html

2. O'Brien S, Reid A, de Benoist AC. Temporal cluster of wound botulism in the United Kingdom. *Eurosurveillance Weekly*, [Serial online] 2002 [cited, 28 February 2002] **9**. Available at http://www.eurosurv.org/2002/020228.html

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Measles Outbreak

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TUBERCULOSIS (TB) IN IRELAND, 2000

Introduction:
In Ireland, information on all notified cases of TB is sent to the National Disease Surveillance Centre (NDSC) for analysis. On January 1st 2000 NDSC, in consultation with the eight health boards and the National Tuberculosis (TB) Advisory Group, implemented an enhanced national TB surveillance system. This surveillance system was based on the minimum dataset to be reported to EuroTB, the European agency that collates national TB data within Europe and contributes that epidemiological data to the WHO global TB control programme.

The year 2000 is the third year that national epidemiological data on TB have been collated by NDSC.

Materials and methods:
Individual case notification forms were completed by public health doctors using the clinical, microbiological and histological data available to them. These forms were then collated in the Departments of Public Health. An Epi-Info file or copies of the TB notification forms were sent to NDSC on a quarterly basis. In the NDSC this anonymised information was merged into an Epi-Info TB database for analysis and quarterly reports were produced.

Population figures were taken from the 1996 census of population. The 95% confidence intervals were used to compare rates between groups of interest. Direct methods of standardisation were used to allow comparison of rates between geographical areas using the Irish population as the standard population.

As in previous years the case definitions used were those recommended by the National Tuberculosis (TB) Working Group.[1]

- A notified case of TB refers to clinically active disease due to infection with organisms of the *Mycobacterium tuberculosis* (*M. tuberculosis*) complex. Active disease is presumed if the patient is commenced on a full curative course of anti-tuberculosis chemotherapy. Persons placed on chemoprophylaxis for preventive treatment or infected by mycobacterium other than *M. tuberculosis* complex are not included as cases.
- Pulmonary TB is defined as a laboratory confirmed case – either a positive smear, histology or culture of a respiratory sample – with or without radiological abnormalities, consistent with active pulmonary TB or a case where the physician takes the decision that the patient's clinical symptoms and/or radiological signs are compatible with pulmonary TB.
- Extra-pulmonary TB is defined as a patient with a smear, culture or histological specimen, from an extra-pulmonary site, that is positive for *M. tuberculosis* complex or a case with clinical signs of active extra-pulmonary disease in conjunction with a decision taken by the attending physician to treat the patient with a full curative course of anti-tuberculosis chemotherapy.

Results:
Three hundred and ninety five cases of TB were notified in 2000 giving a notification rate of 10.9/100,000 population. This represents a 15.8% decrease on the corresponding figure in 1999 (469 cases: 12.9/100,000)(Table 1). Two hundred and forty one cases were male (61%) and 154 were female (39%).

Table 1: Notified TB cases in Ireland, 2000.

Year	Number	Crude rate per 100,000	3 year moving average
1991	640	18.2	
1992	604	17.1	621
1993	598	16.9	581
1994	524	14.5	526
1995	458	12.6	468
1996	434	12.0	438
1997	416	11.5	426
1998	424	11.7	430
1999	469	12.9	439
2000	395	10.9	

The highest age standardised TB incidence rates were seen in the Mid-Western Health Board (14.6 per 100,000) and the Southern Health Board (14.5/100,000). The North Western Health Board (3.9 per 100,000) had the lowest rate. This rate was significantly lower than the national age standardised incidence rate (10.8 per 100,000)(Table 2).

Table 2: Total and age standardised incidence rates for TB in Ireland by health board, 2000.

Health Board	TB cases	Age standardised incidence rate	95% CI
ERHA	143	11.4	9.5 – 13.2
MHB	16	7.6	3.9 – 11.3
MWHB	47	14.6	10.4 – 18.8
NEHB	21	7.4	4.3 – 10.5
NWHB	9	3.9	1.3 – 6.4
SEHB	41	10.4	7.2 – 13.6
SHB	86	14.5	11.3 – 17.7
WHB	38	9.1	6.0 – 12.2
Ireland	**395**	**10.8**	**9.7 – 11.9**

The average age of those diagnosed with TB was 49.2 years with a range from one to 100 years. One third of cases (n=130) occurred in those aged 65 years and older.

The age- and sex-specific incidence rates per 100,000 population in Ireland in 2000 are illustrated in Figure 1. The highest rate was observed in those over 65 years.

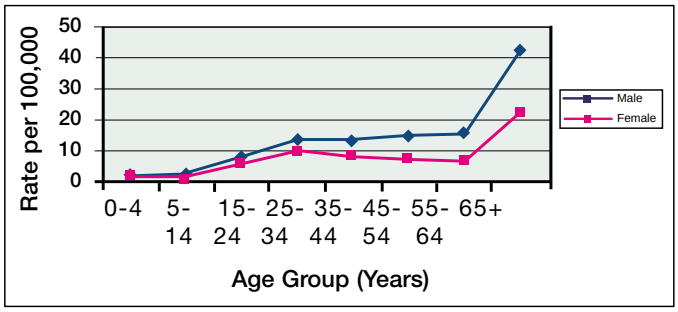

Figure 1: Age- and sex- specific TB incidence rates in Ireland, 2000

Geographic origin:
Forty four (11.1%) of the patients diagnosed with TB were born outside Ireland. Twenty two were born in Europe, 12 in Asia and nine in Africa.

Diagnostic details:
Of the 395 TB notifications, 229 (58.0%) were definite cases which were culture confirmed. Two hundred and eighty cases were pulmonary (70.1%), 92 cases were extra-pulmonary

(23.3%) and 21 cases were pulmonary and extrapulmonary TB (5.3%). The diagnostic breakdown in each health board is shown in Table 3.

Table 3: Diagnostic categories of TB by health board, 2000

Health Board	Pulmonary	Extrapulmonary	P+E	Unknown	Total
ERHA	107	28	8	0	143
MHB	7	8	1	0	16
MWHB	30	10	6	1	47
NEHB	18	3	0	0	21
NWHB	6	2	1	0	9
SEHB	30	9	2	0	41
SHB	52	25	3	0	80
WHB	30	7	0	1	38
Total	**280**	**92**	**21**	**2**	**395**

Of the 305 TB cases with a pulmonary disease component, 144 (47.2%) were sputum positive.

Of the 227 definite culture confirmed cases, 97.8% of isolates were *M. tuberculosis* (n=222), three were *M. africanum* (1.3%) and two were *M. bovis* (0.9%). Two isolates were not available.

Resistance:
Resistance was documented in six cases out of a total of 222 *M. tuberculosis* isolates (2.7%). Mono-resistance to isoniazid was recorded in two cases, mono-resistance to streptomycin in one case and mono-resistance to pyrazinamide in one case. There were two multi-drug resistant TB cases, defined as resistance to at least isoniazid and rifampicin, notified in 2000. Seven patients had HIV in association with TB. Six of these cases had pulmonary TB and one had extrapulmonary TB. Five were culture positive for *M. tuberculosis*. None of these cases were resistant to any standard TB drugs.

Outcome:
Of the 395 cases notified in 2000 the outcome was recorded in 235 cases (59.5%). One hundred and eighty one cases (77.0%) completed treatment. Six patients (1.5%) were recorded as being lost to follow up. There were 37 deaths (9.4%) recorded amongst the 395 TB cases in 2000. Six deaths were attributed to TB. A summary profile of the epidemiology of TB in Ireland from 1998 to 2000 is shown in Table 4.

	1998	1999	2000
Total number of cases	424	469	395
Notification rate (per 100,000)	11.7	12.9	10.9
Foreign born TB patients	35	65	44
% culture positive patients	56.8	55.4	58.0
M. tuberculosis	234	242	222
M. bovis	6	11	2
M. africanum	-	-	3
% smear positive pulmonary cases	38.6	38.0	47.2
Monoresistance to isoniazid	2	4	2
Monoresistance to streptomycin	2	0	1
Monoresistance to pyrizinamide	0	0	1
Multi drug resistant cases	0	2	2
Deaths attributed to TB	6	9	6

Table 4: Summary of epidemiology of TB in Ireland, 1998 - 2000

Discussion:
In Ireland, the year 2000 saw a 15.8% decrease in the TB notification rate when compared to 1999. There was also a decrease in the percentage of cases who were born outside Ireland (11.1% vs 13.8% in 1999). This percentage remains low when compared to that in other European countries. Differences in age standardised TB incidence rates persist between health board areas. In 2000, the SHB and the MWHB had the highest rates of TB. In 1998 and 1999, TB rates were highest in the MWHB and the WHB. Rates remain below the national average in the NWHB. A clear north-south divide can be seen for age standardised incidence rates for 2000 (Figure 2). There were two cases of multi-drug resistant TB in 2000 which is the same as the 1999 figure. Although outcome data are still incomplete, a big improvement was seen in 2000 when compared to that recorded in previous years. Sixty percent of all cases had outcome information recorded in 2000 compared to less than 30% in 1999. This is important information that needs to be recorded as completely as possible.

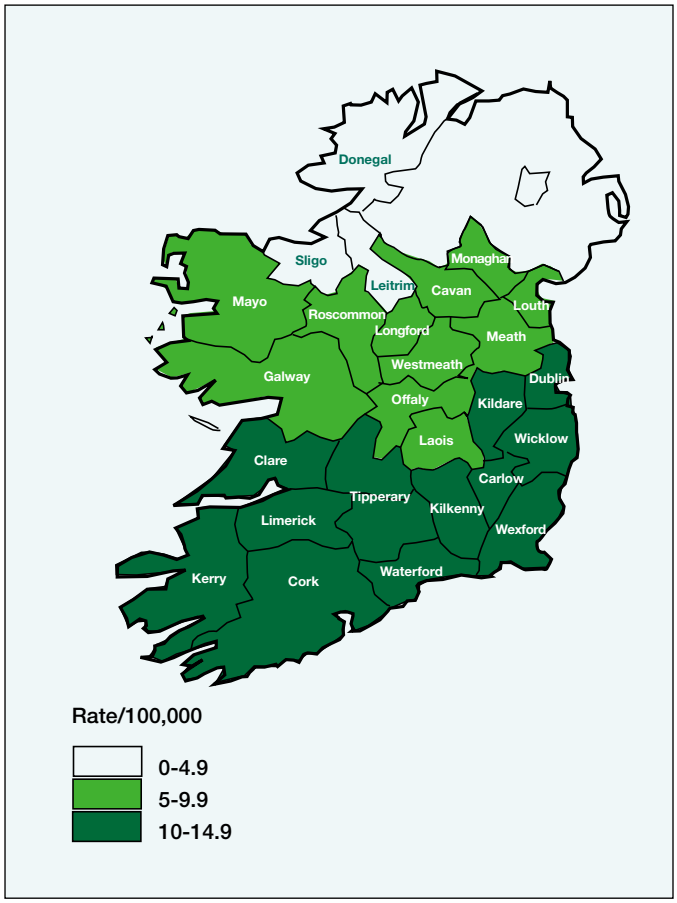

Figure 2: Age standardised incidence rates in Ireland by health board, 2000

Acknowledgements:

We would like to thank all those who participated in the collection of information in each health board region including the notifying physicians, public health doctors, surveillance scientists, microbiologists, nurses, laboratory and administrative staff.

Dr Emer Feely, Dr Patrick O'Sullivan: NDSC.

References:

1. Department of Health (Dublin, Ireland) Report of the Working Party on Tuberculosis 1996: Government Publications.

MEASLES OUTBREAK IN CO. GALWAY

Introduction

On Thursday 28 March 2002, the Department of Public Health, Western Health Board was informed by the Senior Area Medical Officer that two siblings, aged 1 and 2 years from the Tuam area, had been admitted to University College Hospital Galway with suspected measles. Subsequent serological testing confirmed the diagnosis of measles.

Follow-up of these cases confirmed that neither child had had MMR immunisation, and that their siblings were also unimmunised. A total of 21 epidemiologically-linked cases occurred over the following 4 weeks, plus 5 sporadic cases that did not appear to be linked.

Response

Outbreak Control Team

An Outbreak Control Team was convened and met regularly with daily e-mail updates. The NDSC draft protocol "Guidelines for control of measles outbreaks in Ireland" was used during the outbreak for case definitions and procedures.

Follow-up of cases and contacts

Despite prompt vaccination with MMR, two further siblings were subsequently hospitalised with measles. It emerged that the index cases had been in contact with a known case of measles in another part of the country the week before becoming ill.

Vaccination teams

Clinics were arranged at the local health centre in Tuam over the weekend. Vaccination teams were dispatched to all schools in the Tuam area and all GPs in the Western Health Board were encouraged to opportunistically vaccinate defaulters identified from listings supplied to each practice.

Communications

Local GPs were alerted to the situation immediately by telephone. A general measles alert to all hospitals and GPs in the Western Health Board followed. This explained that the outbreak appeared to be localised to the Tuam area, but advised vigilance and liaison with hospital personnel in advance of referral of a patient with clinically suspected measles.

Parents of children attending schools and creches in the Tuam area were written to. The public were kept informed of developments through national and local media. A measles helpline was put in place for concerned parents. Information was also provided on the Western Health Board website to advise that the outbreak was located in the Tuam area and that this was the priority area for vaccination. The website also provided the helpline number and its hours of operation, and provided information regarding MMR vaccination. The helpline was logging up to 70 calls a day and the web traffic reported on the Western Health Board site increased significantly during the outbreak.

Laboratory

Serological confirmation of all cases was requested, especially for new cases which did not appear to be epidemiologically linked.

Lessons learned

- *Communications*: The importance of good proactive public relations via the Director of Communications was evident during the outbreak.
- The lack of a rapid system to contact GPs was a problem as not all have fax machines, e-mail lists are not readily available and post is too slow to allow for effective intervention within the 72-hour window afforded. Telephone calls were necessary to all GP practices within a ten-mile radius of Tuam.
- *Immunisation records*: Lack of computerised records for immunisations other than the primary immunisation programme caused difficulties in tracking pupils who had received MMR vaccinations in the past. This diverted staff from other duties. The prospect of some of the children receiving a third dose of MMR is likely as records may not be updated in time to circumvent this.
- *Vaccine supply*: Vaccine shortage was a further complication. At one stage there were no supplies of vaccine available. Vaccine was mobilised from other parts of the Western Health Board, and we were very grateful for the transfer of vaccine from other Health Boards. Receipt of vaccine stocks was also problematic as the area only had a part-time pharmacist, and the refrigeration for vaccine storage had to be upgraded to accommodate the extra stocks required.
- *Staffing*: There were other human resource problems in addition to the pharmacist. Clerical support in the field was absent and added to the workload of the overstretched Area Medical Officers. Staffing of the helpline was also a problem as the resources used were required elsewhere. Routine work was postponed, as the capacity to absorb the extra workload is not present in outbreak situations like this.
- *Case confirmation*: Salivary testing could be useful in determining the measles genotype, and may avoid cases of vaccine-related "mini-measles" being classified as measles. Collection of salivary specimens for genotyping should occur while the rash is still present, and such samples are processed weekly at the Virus Reference Laboratory. Salivary IgM testing may also be performed on the sample as a non-invasive sampling procedure which may be preferable to blood sampling for young children.

The Public Health and Community Care Departments are now addressing these issues.

Authors

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* OCT included representation from the Department of Public Health, AMOs, Public Health Nurses, Immunisation, Paediatric and Microbiology Departments at UCHG.

Annual Conference on Epidemiology and Control of Communicable Diseases and Environmental Hazards.

The annual conference on epidemiology and control of communicable diseases and environmental health hazards (health protection) will be held at CDSC Colindale, London from Monday 4th November to Wednesday 6th November 2002. This year the conference will celebrate the 25th anniversary of CDSC.

The conference will address important public health issues that have arisen in the past year and provide fresh perspectives on established areas of disease prevention and control. Short papers on recent outbreaks and surveillance initiatives will also be presented. Abstracts are now invited for papers and posters on the various conference themes: immunisation: new vaccines/current controversies; health protection: new approaches "Getting Ahead of the Curve"; assessing and communicating risks; surf and turf: food, water and animals; surveillance, control and prevention: expanding the evidence base; emerging hazards/emerging infections. The closing date for receipt of abstracts is 14th June 2002. For further details on submission of abstracts please contact Vivienne Fitch at PHLS/CDSC, 61 Colindale Avenue, London NW9 5EQ, tel:020 8200 6868 ext. 4569, fax: 020 8200 7868, e-mail: vfitch@phls.org.uk

Salmonella Monthly Report (April 2002):

Strains are allocated to months based on the date of receipt of the isolate from the referring laboratory. These figures are provisional as work may not be finished on particular strains at the time of publication. Data are provided courtesy of Prof Martin Cormican and Dr Geraldine Corbett-Feeney, INSRL.

Health Board	E	M	MW	NE	NW	SE	S	W	Total
S. Typhimurium	2	2	0	0	0	3	1	1	9
S. Enteritidis	2	0	0	0	0	1	0	0	3
S. Bareilly	1	0	0	0	0	0	0	0	1
S. Lexington	0	0	0	0	0	1	0	0	1
S. Mbandaka	0	0	0	0	0	0	0	1	1
S. Newport	1	0	0	0	0	0	1	0	2
Unnamed	1	0	0	0	0	0	0	0	1
Total	**7**	**2**	**0**	**0**	**0**	**5**	**2**	**2**	**18**