EPI-INSIGHT

IONAD NAISIUNTA FAIRE GALAIR

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IN THE NEWS!

Syphilis Increase in Dublin

The Genito-Urinary medicine Infectious Disease (GUIDE) clinic in St James's Hospital and other genito-urinary medicine services in Dublin have reported an increase in the number of people diagnosed with syphilis this year. As of December 21st, 2000, twenty-six cases of early syphilis were reported (23 in men who have sex with men) of which 11 were primary syphilis and 15 were secondary. Similar situations have been reported in Paris and in England (Manchester and Brighton).

Syphilis is a sexually transmitted infection caused by the organism *Treponema pallidum*. It may present as a chancre (ulcer) developing within three weeks of infection, in the primary stage. Symptoms of secondary syphilis may include a generalised rash, malaise, fever and sore throat. In the latent phase, patients may be asymptomatic. Untreated, syphilis may progress to a tertiary phase with serious cardiovascular and neurological symptoms. The organism can be transmitted by contact with infectious skin or mucosal lesions and does not require penetrative sex.

Effective surveillance systems are needed for swift identification of syphilis cases and detailed clinical and risk factor information is required for the formulation of intervention strategies. In Dublin, an outbreak control team has been established and a case-control study has begun. The Eastern Regional Health Authority, GUIDE, the National Disease Surveillance Centre, the Gay Men's Health Project and the HIV Strategies Group are collaborating to devise preventive measures. Awareness in the gay community has been promoted by disemmination of information (posters and leaflets) through the relevant community groups and through reports in the gay press. Early presentation is essential for effective and successful antimicrobial therapy. People who believe they may have put themselves at risk can ask are being advised to attend at their local STI clinic. For anyone in contact with a known case, serology tests should be checked at every two weeks for three months and then three-monthly, thereafter. For all persons with an unknown contact, serology should be repeated at three months to rule out false negatives.

Awareness and Surveillance of Hospital Acquired Infections

The Infection Control Nurses Association (ICNA) embarked on a new initiative last October by holding an Infection Control Awareness week. It was spearheaded by co-ordinators in each of the regional groups throughout England, Scotland, Wales and Ireland. Jane Murphy, Infection Control Nurse in Cherry Orchard Hospital, Dublin, explained the emphasis for the week in Ireland was "Hand Hygiene". This was highlighted by a poster campaign; leaflets for staff, patients and relatives; study sessions; and a media campaign through Health Board publications, alerting healthcare personnel of the importance of hand hygiene. At the launch in England, Minister for Health, John Denham said there was a lack of reliable information on levels of infection[1], a criticism echoed by the Public Accounts Committee of the UK House of Commons. This report[2] observed that hospital-acquired infections (HAI) endanger patients' lives and are a major drain on resources. New surveillance activities in England are likely to involve wound infections following orthopaedic surgery, bacterial blood-stream infections and post-discharge infections. This report follows the release in the UK of the strategy and action plan to combat antimicrobial resistance[3].

Ireland is represented on a pan-celtic HAI surveillance committee. This committee is considering HAI surveillance modules that would allow comparable data to be gathered in different countries. There is also close cooperation with a number of European HAI surveillance groups.

The surveillance and control of HAI in Ireland were identified as a major priority in the Strategy for control of Antimicrobial Resistance in Ireland (SARI) report. A document outlining the requirements for implementation of the SARI recommendations is being considered by the Department of Health and Children. This document highlighted the shortage of infection control personnel in Ireland and called for funding for microbiologists, infection control nurses and surveillance scientists to be prioritised. Management teams formulating service plans may find these developments informative. This will ensure that once the funding is made available it will be appropriately directed in a timely manner.

1. Institute of Biomedical Science. *Biomedical Scientist* 2000; 44 (12): 1118.
2. Public Accounts Committee. The Management and Control of Hospital Acquired Infection in Acute NHS Trusts in England. www.publications.parliament.uk/pa/cm/cmpubacc.htm
3. Department of Health (England) UK Antimicrobial Resistance Strategy and Action Plan. www.doh.gov.uk/arbstrat.htm

Screening for Genital Chlamydia trachomatis Infection in Women

Introduction:

Chlamydia trachomatis genital infection is the commonest curable, sexually transmitted bacterial infection in the western world[1]. Prevalence rates as high as 29% have been described in some at risk populations[2]. Unrecognised infection in women can have serious consequences with an increased risk of pelvic inflammatory disease, infertility, ectopic pregnancy and chronic pelvic pain. Furthermore, infection in pregnancy can be transmitted vertically resulting in pneumonitis or ophthalmitis in the infant. In women, the majority of genital infections are asymptomatic and when symptoms occur they are often non-specific. Infection in men usually produces symptoms prompting attendance for investigation and treatment. Women therefore will be diagnosed with chlamydial infection when they present with symptoms or when they are picked up through contact tracing of symptomatic partners. Another potential route of diagnosing chlamydial infection in women is through an organised screening programme.

Why screen for *Chlamydia trachomatis*?

Genital infection with *Chlamydia trachomatis* (CT) has many features making it suitable for screening. There is an asymptomatic phase of infection particularly in women, and as mentioned earlier, the majority of women with genital CT infection will have no symptoms. The introduction of DNA amplification tests such as ligase chain reaction (LCR), asymptomatic infection can be reliably and easily diagnosed. LCR has a reported specificity of >99% in both men and women regardless of specimen site[3]. First void urine specimens in women with urethritis and /or cervicitis offers sensitivity of up to 94%[4]. Once infection has been diagnosed an effective treatment is available. Asymptomatic infection that goes untreated is associated with significant morbidity. It has been reported that up to 70% of women with tubal factor infertility will demonstrate antibodies to chlamydia on serological testing[5]. Very many of these women will not report previous symptoms of salpingitis (inflammation and infection in the fallopian tubes). The occurrence of severe tubal damage despite mild clinical signs is probably due to the more subacute and indolent nature of chlamydial salpingitis versus salpingitis caused by other organisms.

Importantly, the risk of both acquisition and transmission of HIV-1 are increased in the presence of chlamydial infection[6]. Inflammatory sexually transmitted infections (STIs) such as chlamydia increase the prevalence of HIV-1 shedding and the HIV-1 viral load, thus increasing the transmissibility of HIV-1. In addition, CD4 cells (also known as T-cells, which are the cells that HIV uses to gain access to humans) are attracted to the endocervix in chlamydial infection thus increasing the potential for acquiring infection as HIV-1 infects CD4 cells.

Who should be screened?

Some of the many risk factors for genital CT infection include young age (especially <25 years), multiple sexual partners, recent change in sexual partner, presence of genital symptoms and the presence of another STI[2]. Young age and recent change in sexual partner are the most commonly quoted risk factors for infection.

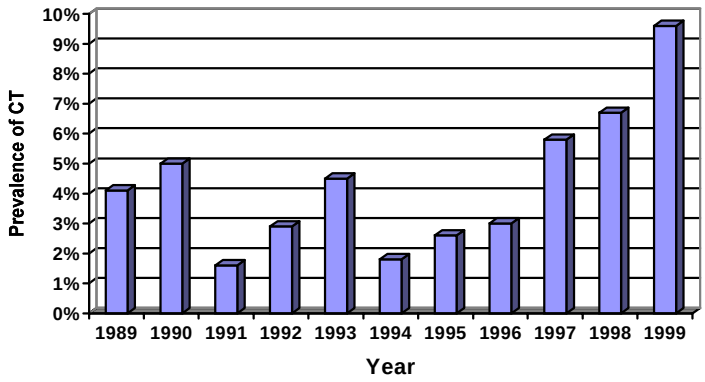

Figure 1: Prevalence of C.trachomatis in persons attending GUIDE 1989 - 1999.

Testing for CT is currently performed on all males and females who present at STI clinics in Ireland, regardless of symptoms. In 1999 at the Genito-Urinary Medicine and Infectious Disease (GUIDE) clinic at St. James's Hospital, Dublin, the prevalence of CT infection was 9.6%; over half (52%) of these infections were in females. There has been an increase in the number of cases of uncomplicated chlamydial infection over the last ten years (see Figure 1). This is explained, in part, by the introduction of the more sensitive LCR test in 1998 at this centre, versus the previously used culture. Figure 2 gives a representation of the reported cases of CT from 1995 to 1999 by region. Two-thirds of reported cases occurred in the Eastern Regional Health Authority (ERHA). This does not necessarily reflect the geographical origin of the cases, as many may have presented to larger centres within the ERHA. Furthermore, there may have been other identified cases of CT that were not reported. A number of surveillance studies are required to determine prevalence rates in the Irish population. This will facilitate the formulation of a policy indicating who should be offered screening and whether it should be opportunistic or universal with a system of call and recall. In a universal screening programme all women who fit set criteria for screening are invited to attend for testing. This requires access to names and addresses. In opportunistic screening, women presenting to certain services (for example, family planning clinics, antenatal clinics or general practices)are invited to be tested.

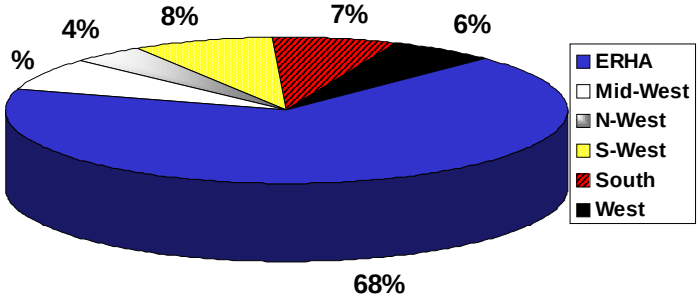

Figure 2: Geographic distribution of reported cases of CT 1995-9 (n=2586).

In the United Kingdom a pilot study assessing the feasibility of screening for genital *Chlamydia trachomatis* infection is currently underway. The UK advisory committee has decided that screening be selective rather than universal and therefore sexually active women <25 years and those >25 years with a new sexual partner or more than two sexual partners in the past year are being targeted. Women pre-

senting at general practices, family planning clinics, termination clinics, genitourinary medicine clinics and certain women's services in hospitals will be offered screening[2].

A recent study in Amsterdam has shown that opportunistic screening can achieve higher participation rates and thus detect more infections than universal screening[7].

How should they be screened?

As mentioned earlier DNA amplification techniques particularly ligase chain reaction offer excellent specificity and sensitivity in the diagnosis of CT. Furthermore, test results from a first void urine specimen are as good as results from specimens collected from other sites thus precluding the need to perform genital examination for the screening process[8]. This will obviously be more acceptable to those being screened and less time consuming for the screener.

Who should screen?

A screening programme which limits testing to those attending STI clinics will not diagnose those who are asymptomatic and do not perceive they have a need to attend. Therefore the screening process must extend beyond the STI clinics. This would be likely to involve general practises, family planning clinics, antenatal clinics, colposcopy clinics and other women's health clinics. Before implementing an organised screening programme it would be important to establish the attitudes of the likely screeners to such a programme.

In order for a screening programme to be effective there must be close co-operation between public health, microbiology, primary care providers and STI services in the follow-up and management of positive results. Those with positive results will need screening for other STIs. Furthermore, the health advisor plays an essential role in the provision of a sexual health service through organisation of partner notification, education and advice regarding safer sexual practices. The integral role of partner notification in the management of STIs is nicely demonstrated by the Swedish experience where, over a 25 year period up to 1994, there has been a steady decline in the number of women requiring hospital admission with pelvic inflammatory disease. This followed the introduction of a comprehensive national programme for tracing all *Chlamydia trachomatis* and *Neisseria gonorrhoeae* contacts[9].

Is there any evidence that screening works?

Case studies from Sweden and Wisconsin in the United States have demonstrated a reduction in the prevalence of infections with the introduction of screening for genital *Chlamydia trachomatis* infection[10,11]. One randomised controlled trial from the United States has demonstrated a 56% reduction in the incidence of pelvic inflammatory disease in those assigned to chlamydia screening versus those enrolled in standard care[12].

Conclusions

There is evidence to support a screening programme for asymptomatic genital chlamydia infection. Prior to the introduction of such a programme in Ireland many issues need to be addressed and important questions answered. In order that an optimal service can be provided a multi-disciplinary ought to be adopted to ensure that those identified with infection are appropriately managed and contacts identified.

Dr Fiona Lyons, Dr Fiona Mulcahy and Dr Colm Bergin, Department of Genito-Urinary Medicine and Infectious Diseases (GUIDE), St. James's Hospital, Dublin 8

References

1. Joshi UY and Dixon W. General Practitioners' views on the screening for genital Chlamydia trachomatis infection and partner notification. *Int J STD AIDS* 2000; **11**:588-591.
2. Chief Medical Officer's Expert Advisory Group. Main report of the CMO's expert advisory group on Chlamydia trachomatis. London: Department of Health, 1998.
3. Morrazzo JM et al. New approaches to the diagnosis, treatment and prevention of chlamydial infections. *Current Topics Infect Dis* 1998; **18**: 37-59.
4. Lee H et al. Diagnosis of Chlamydia trachomatis genitourinary infection in women by ligase chain reaction assay of urine. *Lancet* 1995; **345**: 213-216.
5. Cates W et al. Genital chlamydial infections: Epidemiology and reproductive sequelae. *Am J Obstet Gynecol* 1991; **164**: 1777-1781.
6. MMWR Advisory Committee for HIV and STD prevention. HIV prevention through early detection and treatment of other sexually transmitted diseases – United States. *MMWR* July 31,1998 Vol. **47** No. RR-12.
7. Van den Hoek J et al. Opportunistic screening for genital infections with Chlamydia trachomatis among the sexually active population of Amsterdam. *Ned Tijdschr Geneesksd* 1999; **143**: 688-672.
8. Andrews W et al. Detection of genitourinary tract *Chlamydia trachomatis* infection in pregnant women by ligase chain reaction assay. *Obstet Gynecol* 1997; **89**: 556-560.
9. Kamwendo F et al. Partner notification in Sweden: Programmes to reduce PID. The Swedish experience. *Lancet* 1998; **351**, Suppl 3:25-28
10. Hermann B, et al. A retrospective study of efforts to diagnose infections by Chlamydia trachomatis in a Swedish county. *Sex Transm Dis* 1991; **18**:233-237.
11. Addiss DG et al. Decreased prevalence of Chlamydia trachomatis infection associated with a selective screening programme in family planning clinics in Wisconsin. *Sex Transm Dis* 1993; **20**: 28-34.
12. Scholes D, et al. Prevention of pelvic inflammatory disease by screening for cervical chlamydial infection. *NEJM* 1996; **334**: 1362-1366.

Key Messages:

➢ Genital Chlamydia trachomatis infection is the commonest curable bacterial STI in the western world.

➢ Prevalence rates vary with age, <25 years being most important.

➢ Attending morbidity in women, if unrecognised and untreated, increase the risk of transmission/acquisition of HIV.

➢ Treatment is simple and effective.

➢ Partner notification is paramount to prevent re-infection.

➢ Screening for other STIs should follow a positive CT result.

➢ Screening programmes in other countries have proved effective.

Oral Polio Vaccine Statement

In December, the Department of Health and Children in Ireland reported that one UK blood donor, the plasma of whose donation was used in Britain to make a batch of the product Human Serum Albumin, had recently been diagnosed as having the variant form of Creutzfeldt Jakob Disease (vCJD).

According to the statement "approximately 83,500 doses of the Evans/Medeva polio vaccine in question were distributed in Ireland between 15 January 1998 and 30 January 1999."

"It is not possible to state in medicine that there is absolutely zero risk, but expert advice, both national and international, available to the Department of Health and Children indicates that in this situation it is almost certainly the case." The National Disease Surveillance Centre fully supports the statement made by the Minister of Health and Children in relation to the oral polio vaccine. There is no longer any UK-sourced plasma material contained in any vaccine in use in Ireland. Parents are advised to continue with the normal childhood vaccination programme.

Additional information will be displayed on the Department's website (*www.doh.ie*) and on the websites of the Irish Medicines Board (*www.imb.ie)* and on the websites of the individual health boards.The numbers of the batches of Evans Polio Vaccine, with the product description POLIOV/10/1EI, are listed in the adjacent table.

Batch	Expiry date
E7213/01A	10/05/98
E7213/02A	10/05/98
E7213/02B	09/06/98
E8214/01A	02/08/98
E8214/01B	15/09/98
E8215/01A	24/12/98
E8215/01B	31/01/99

National Outbreak of Salmonella in Scotland

In August 2000, there was an outbreak of *Salmonella* Enteritidis phage type (PT) 5c and PT 6a in Lanarkshire, Scotland. Efforts are underway now to determine the cause of a resurgence in reported cases in December 2000, affecting more than ninety people all across Scotland. The Food Standards Agency[1] declared a national outbreak and a national outbreak control team is investigating. The SCIEH Weekly Report[2] confirmed that 19 cases of *S*. Enteritidis PT 5c were notified in week 47, compared to 4/5 cases in previous weeks. In this recent outbreak, the worst affected area is Lanarkshire, where 44 cases of *S*. Enteritidis PT 5c and PT 6a have been detected. The incident has been linked to chinese food outlets. There does not appear to be a similar problem in England or in Europe.

In Ireland, the Interim National Salmonella Reference Laboratory has received ten isolates of *S*. Enteritidis phage type **6a** from seven patients in the year 2000 to date (December 7th) and one isolate of this phage type from a food item. Isolates were received from patients over the period of July to October, from several centres around the country and there was significant diversity in relation to antibiotic resistance patterns. The availability of phage typing data for Ireland means that it is possible to determine if cases related to an outbreak in a neighboring country are occurring in Ireland. In this case it appears that this is not the case. A critical factor in the ability of the Interim National Salmonella Reference Laboratory to provide information of this kind, is the willingness of the microbiology laboratories around the country to submit isolates as quickly as is practical, as the comprehensiveness and timeliness of our data base is dependent on this continuing support.

1. Food Standards Agency: Scotland http://www.foodstandards.gov.uk/press_releases/scotland/prs001123.htm

2. SCIEH Weekly Report 2000; 34:47. http://www.show.scot.nhs.uk/scieh/PDF/pdf2000/0049.pdf

VTEC Conference in Ireland

Teagasc, The National Food Centre, Dublin is co-ordinating a project on "A European study on the animal, food and biomedical aspects of verotoxigenic *E. coli* including serotype O157" which is funded by the European Commission Framework IV Research Programme. The objective of this EU project is to promote collaboration between scientists from veterinary, food and biomedical backgrounds with an interest in verocytotoxigenic *E. coli* and to effectively communicate the latest research findings to the end users of this information. Five thematic areas of interest in relation to *E. coli* O157:H7 are being addressed in this project including methodology, survival and growth characteristics, virulence and pathogenicity factors, epidemiology, and control measures which can be applied to reduce the risk posed by the pathogen. Publications from the project are available on request from the address below or can be downloaded from the project web site http://www.research.teagasc.ie/vteceurope.

The National Food Centre is organising a research conference and workshop on **"Epidemiology of verotoxigenic *E. coli*"** which will be held at The Grand Hotel and Conference Centre, Malahide, Co. Dublin, on **8th-10th February 2001**. Further information and registration forms can be obtained from G. Duffy, Teagasc, The National Food Centre, Dunsinea, Castleknock, Dublin 15, Ireland. **tel:01-8059500; fax:01-8059550; email: g.duffy@nfc.teagasc.ie** or at www.research.teagasc.ie/vteceurope/Epidemiology.html

Salmonella Monthly Report (November):

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	6	8	1	0	1	2	1	1	20
S.Enteritidis	3	2	1	0	1	0	2	5	14
S.Brandenberg	0	0	0	0	0	0	1	0	1
S.Give	1	0	0	0	0	0	0	0	1
S.Hadar	1	0	0	0	1	0	0	0	2
S.Haifa	1	0	0	0	0	0	0	0	1
S.Infantis	1	1	0	0	0	0	0	0	2
S.Kentucky	2	0	0	3	0	0	0	0	5
S.Larochelle	0	0	0	0	1	0	0	0	1
S.Mbandaka	1	0	0	0	0	0	0	0	1
S.Schwarzengrund	0	2	0	0	0	0	0	0	2
S.Takoradi	0	0	0	0	0	0	0	1	1
S.Virchow	2	0	0	0	0	0	1	0	3
Unnamed	1	0	0	0	0	0	0	0	1
Total	19	13	2	3	4	2	5	7	55