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Communicable Diseases Intelligence

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Contents:

VIRUS REPORTING SCHEME - A total of 1033 reports were received this period. Patterns suggested by the reports included the continuation of widespread echovirus type 11 activity (84 reports received (87% of specimens collected in March) compared with 36, 34 and 43 for the previous three periods). Aseptic meningitis was still the most common clinical feature (62%), with 71% of infections reported in children aged < five years and 26% in infants aged < six months. The number of reports of respiratory tract infections was still low (96 reports compared with 115, 131 and 110), with Mycoplasma pneumoniae infections accounting for fewer illnesses (19 reports compared with 46, 88 and 33) but counterpoised by the beginning of the seasonal rise of respiratory syncytial virus infections in young children (21 reports compared with 19, 5 and 7).

. The State Health Laboratory Services, Perth, reported the first adenovirus type 25 notification since the commencement of the CDI scheme in 1978. The virus was isolated from a ten month old infant with gastro-enteritis.

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cases have been reported from the over 200,000 persons who have received the vaccine since licensure, or among the several thousand persons of low risk for AIDS (mostly health care workers) who participated in vaccine trials from 1975 to date. Two homosexual men who participated in the original HBV field trials have developed AIDS. This represents an AIDS incidence rate lower than that observed among men screened for participation in the vaccine trials but who did not receive the vaccine. The HBV vaccine manufacturing process includes three different inactivation procedures which inactivate representative viruses of all known types (see CDI (1983) 83/1: 5).

Thus, surveillance in the USA to date has uncovered no firm evidence of serious reactions to HBV vaccine.

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PELVIC INFLAMMATORY DISEASE

In recent years, the focus on sexually transmitted diseases (STD) has shifted from their incidence to their consequences. Pelvic inflammatory disease (PID) is an important complication of lower genital tract infection in women with a considerable associated morbidity[1], and leading to a high incidence of infertility, sterility, ectopic pregnancies and other complications in young females. Acute PID is usually diagnosed in sexually active young women, and in most instances arises from an ascending microbial infection from the vagina and endocervix to the fallopian tubes and contiguous structures, unrelated to pregnancy or surgery. It has been estimated that the incidence of PID in women, age 15-39, in industrialised countries is 10-13 per 1000 per year with a peak incidence of 20 per 1000 per year in the 20-24 year age group.[2]

The only routine data available are hospital in-patient statistics which doubtless underestimate the incidence of the disease because many cases will not have been treated in hospital. In the period 1978-79, Queensland was the only State that reviewed their hospital separations for various forms of non-pregnancy, non-puerperal associated pelvic infections. Clinical (acute, recurrent and chronic) PID was converted to the International Classification of Disease (ICD) codes 612 (acute salpingitis and oophoritis); 613 (chronic salpingitis and oophoritis); 614 (salpingitis and oophoritis, unqualified); and 616 (inflammatory disease of the parametrium and pelvic peritoneum). Table 1 details the number of patients treated in Queensland hospitals for inflammatory disease of the female pelvic organs in 1978-79. Unfortunately, no national trends may be extrapolated from this limited data.

TABLE 1 Hospital admissions for selected ICD codes (612, 613, 614, 616) - Queensland 1978-79[1]

ICD code		1978	1979
ICD-8	(612-614	223	
	(615-616	2970	
ICD-9	(614		1168
	(615-616		751

(1) Australian Bureau of Statistics, 'Queensland Hospital Morbidity.' Catalogue number 4303.3.

Morbidity was coded according to the ICD eighth revision in 1978, and included the codes 612, 613, 614 and 616. In 1979, morbidity was coded according to ICD ninth revision and included the codes 614, 615 and 616.

The mortality attributed to these infections in Australia for the ten year period 1972-81 is given in Table 2.

TABLE 2 Mortality for the ICD codes 612, 613, 614 and 616 - Australia (1972-81)

ICD code		1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
ICD-8	(612	-	1	-	-	-	-	-			
	(613	1	-	-	-	-	-	-			
	(614	2	2	-	1	3	1	1			
	(616	4	8	9	10	6	1	4			
ICD-9	(614								5	4	7
	(615								-	-	2
	(616								1	1	1
TOTAL		7	11	9	11	9	2	5	6	5	10

Australian Bureau of Statistics, 'Causes of Death' Catalogue number 3303.0.

Statistics published in other countries on the incidence of salpingitis and other pelvic infections as sequelae of STD are more revealing. The Hospital Discharge Survey of the US National Center for Health Statistics indicated that approximately 212,000 women were admitted to hospital each year for PID[3], and it was calculated that there were a million cases of PID a year, of which 15-20% resulted in bilateral tubal occlusion and infertility. In England and Wales, annual discharges and deaths due to PID have more than doubled in the past 20 years (from 5850 in 1960 to 12,450 in 1979).[4] In Canada, data for the period 1961-77 indicated an increased hospitalisation rate of 91 to 139 per 100,000 per year.[5] Other statistical aspects of PID comprise estimated hospital costs of three million pounds annually in the UK[6], and more than $600 million annually for the treatment of acute PID in the USA[7].

Acute PID presents with a broad spectrum of clinical manifestations including lower abdominal pain, purulent cervical discharge, cervical motion tenderness and adnexal tenderness, as well as fever and leucocytosis.[8] However, insistence on a rigid set of criteria is unsatisfactory, resulting in a great number of cases being overlooked, and an objective case criterion using laparoscopy has been proposed.[8]

PID is associated with a multiplicity of organisms, and apart from *Neisseria gonorrhoeae*[9], *Chlamydia trachomatis*[10] and *Mycoplasma hominis*[11], there is some evidence that *Ureaplasma urealyticum*[12], *Escherichia coli* and some anaerobes such as *Peptostreptococcus*, *Peptococcus* and *Bacteroides* species may be responsible for some cases.[13] Mixed infections are probably frequent, and a potential pathogen isolated from the cervix may bear little relation to the organisms present in the fallopian tubes[14], since their environment may have been altered by the cervical pathogen allowing overgrowth of secondary invading organisms. In addition, women who have intrauterine contraceptive devices (IUD's) are at increased risk of developing acute PID[15] (in the UK usage of IUD's has increased from 290,181 women in 1976 to 424,207 in 1980[4]). On the other hand, oral and barrier contraceptive agents appear to protect against PID.[16,17] The microbiological picture of PID does not appear to have a

global uniformity. In Sweden C. trachomatis appears to be of prime importance[18], whereas N. gonorrhoeae is the principal candidate is San Franscisco.[19] However, it has been suggested that these conflicting findings may be an artefact dependent on the type of specimen taken and the patient populations studied[20], since patients with mild PID (as studied in Sweden) are more likely to have C. trachomatis as the causative agent.[21]

In 1979, the Centers for Disease Control issued guidelines for an initiative to control PID. It was recognised that PID is associated with a multiplicity of organisms, but because of the availability of laboratory testing and an already established protocol for following gonorrhoea cases and their consorts, efforts were limited to gonococcal PID. The objectives of the program include:-

- Ensuring proper medical assessment and management of patients.
- Post-treatment follow-up and test-of-cure to prevent complications.
- Rapid reporting to health departments for contact follow-up to prevent reinfection.
- Education and counselling of patients and partners.

PID surveillance is California has shown that emergency rooms report over 70% of cases, and this presents some difficulty in rapid follow-up.[22] Since diagnostic tests for gonorrhoea frequently require several days for laboratory processing, many women leave the hospital not knowing their symptoms could be associated with a sexually transmitted disease. Treatment requires at least ten days, so that the patients are then possibly exposing themselves to re-infection by their partners. Epidemiological follow-up of sex partners is often difficult, since significant numbers of them are asymptomatic and therefore more difficult to motivate to seek care. In 1981 in California, 41,331 cases of gonorrhoea were reported in females, of whom 4884 (11.8%) had gonococcal PID. Examination of male contacts revealed approximately 50% infected, and of those 40% were asymptomatic.[22]

It is now recognised that individual clinicians in STD clinics, family practices and specialities such as obstetrics-gynaecology and emergency medicine must play the major role in preventing PID and limiting its consequences. To prevent PID they must identify, examine and treat both the female partners of men with STD and women at high risk of having an STD. To prevent the consequences of PID, they must diagnose the condition promptly and accurately, begin effective treatment immediately, counsel all patients regarding the nature and importance of their illness, and ensure the examination and treatment of male sexual partners.

References

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2. Am. J. Obstet. Gynecol. (1980) 138: 880
3. Sex. Trans. Dis. (1979) 6: 224
4. CDR (1983) 83/05: 3
5. CDWR (1981) 1: 101
6. Lancet (1981) 1: 315
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8. Am. J. Obstet. Gynecol (1969) 105: 1088
9. Sex Trans. Dis. (1979) 6: 221
10. NEJM (1977) 296: 1377

11. Br. J. Vener. Dis. (1970) 46: 779
12. Sex. Trans. Dis. (1981) 8: 198
13. NEJM (1975) 293: 166
14. Am. J. Obstet. Gynecol. (1980) 138: 985
15. J. Reprod. Med. (1978) 20: 200
16. Am. J. Obstet. Gynecol. (1980) 138: 852
17. JAMA (1982) 248: 184
18. Br. J. Vener. Dis. (1981) 57: 125
19. Am. J. Obstet. Gynecol. (1979) 134: 68
20. Sex. Trans. Dis. (1981) 8 Supplement: 308
21. Am. J. Obstet. Gynecol. (1980) 138: 1017
22. California Morbidity (1983) No. 8.

HEPATITIS B VIRUS VACCINE SAFETY

(Based on MMWR (1983) 32: 134, and California Morbidity (1983) No. 10).

Since its licensure in 1981 and its general availability in July 1982 in the USA, hepatitis B virus (HBV) vaccine has been administered to over 200,000 individuals, mostly health care workers. In a collaborative effort, the Centers for Disease Control, the Food and Drug Administration, and Merck, Sharp and Dohme have collected information on illnesses that developed after receipt of HBV vaccine.

As of 1 March 1983, illness had been reported in 118 vaccinees (most illnesses began within four weeks of the first vaccine dose). Of the 118 cases, 56 (47.5%) were considered not likely to be attributable to vaccine use because another specific cause was identified, or the onset of illness occurred before receipt of vaccine, or the reported event was unrelated to the vaccine (e.g. deltoid pain after gluteal injection). Many of the remaining 62 illnesses may represent "background" disease rather than adverse reactions to the vaccine. Of these 62 persons, 57 (91.9%) had mild or moderate illness that included; six neurological conditions (five persons with tremors and one with recurrent Bell's palsy); 11 skin or mucous membrane lesions (hives, herpes zoster, psoriasis and nonspecific lesions); 10 musculo-skeletal ailments (including generalised aches, joint pain and joint inflammation); five hepatitis-like illnesses (with increased liver enzyme levels and no other identified cause); and 25 miscellaneous complaints (14 persons with flu-like syndrome, four with injection site reactions, four with diarrhoea, one with headache, one with vomiting, and one with self-limited chest pain with a normal cardiac evaluation).

Six persons had serious illness (i.e. requiring hospitalisation or other intensive medical care, lasting over two weeks, causing permanent disability or threatening life). Five of these serious illnesses included one case each of erythema multiforme, aseptic meningitis, grand mal seizure, possible transverse myelitis, and Guillain-Barré Syndrome (GBS). A second case of GBS was reported in a vaccinee, but it was possibly associated with a cytomegalovirus infection with onset ten days before neurological symptoms developed. The two GBS cases noted fall within the expected background incidence rate among unimmunised adults (2.3 GBS cases/100,000 adults/year).

Concern has arisen as to whether acquired immune deficiency syndrome (AIDS) could be associated with HBV vaccine since it is made from human plasma. Since 1979, homosexual male HBsAg carriers have been the major source of this plasma. No AIDS

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AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 17/3/83 - 30/3/83 BULLETIN NUMBER . 83/7

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES

VIRUS OR VIRAL ANTIGEN	ICPMR (NSW)/ WVH (ACT)	RAHC (NSW)	PHH/ POW (NSW)	FAIR-FIELD (VIC)	RCH (VIC)	IMVS (SA)	STATE LAB (QLD)	STATE LAB (WA)	Total
0100 ADENOVIRUS NOT TYPED						5	2	1	8
0101 ADENOVIRUS TYPE 1			2		3				5
0102 ADENOVIRUS TYPE 2	1		3			2			6
0103 ADENOVIRUS TYPE 3						1			1
0105 ADENOVIRUS TYPE 5			1	1		4			6
0109 ADENOVIRUS TYPE 9								2	2
0119 ADENOVIRUS TYPE 19								3	3
0125 ADENOVIRUS TYPE 25								1	1
0199 ADENOVIRUS TYPING PENDING			3		1	3			7
0201 INFLUENZA A VIRUS	1		2					2	5
0203 INFLUENZA B VIRUS			3	1					4
0302 PARAINFLUENZA VIRUS TYPE 2				1		1			2
0303 PARAINFLUENZA VIRUS TYPE 3	4					3		1	8
0399 PARAINFLUENZA VIRUS TYPING PENDING							1		1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)						2	17	2	21
0500 RHINOVIRUS (ALL TYPES)			1	6	8	1	4		20
0600 MYCOPLASMA PNEUMONIAE	2		4	1		5	3	4	19
0700 ORNITHOSIS-PSITTACOSIS				1		2			3
0899 COXSACKIEVIRUS GROUP A TYPING PENDING							4		4
0901 COXSACKIEVIRUS B1					1				1
0902 COXSACKIEVIRUS B2						1			1
0903 COXSACKIEVIRUS B3	1			2	3	2			8
1000 ECHOVIRUS NOT TYPED							1		1
1007 ECHOVIRUS TYPE 7							1		1
1009 ECHOVIRUS TYPE 9						1			1
1011 ECHOVIRUS TYPE 11	11	7	1	12	19	3	31		84
1014 ECHOVIRUS TYPE 14							4		4
1017 ECHOVIRUS TYPE 17				1					1
1026 ECHOVIRUS TYPE 26						1			1
1030 ECHOVIRUS TYPE 30		1							1
1099 ECHOVIRUS TYPING PENDING				11					11
1101 POLIOVIRUS TYPE 1						1			1
1102 POLIOVIRUS TYPE 2		1					1		2
1104 POLIOVIRUS-VACCINAL STRAIN					1		1		2
1200 MUMPS VIRUS		1		1	1	3	1	1	8
1300 HERPES VIRUS GROUP-NOT TYPED	19					6		1	26
1301 HERPES SIMPLEX VIRUS NOT-TYPED		1		8		1	1	70	81
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	3		1					1	5
1303 VARICELLA-ZOSTER VIRUS	1		1	2			1		5
1306 HERPES SIMPLEX TYPE 1	6			14		12	12		44
1307 HERPES SIMPLEX TYPE 2	75			35		35	74		219
1399 HERPES VIRUS TYPING PENDING			12		1	5			18
1401 COXIELLA BURNETI							6		6
1502 PICORNA VIRUS-NOT TYPED			2						2
1521 MEASLES VIRUS				1	1				2
1522 RUBELLA VIRUS				1			1	1	3
1532 HEPATITIS B ANTIGEN	12		10	46		18	4	1	91
1535 HEPATITIS A ANTIBODY	8		2	8		4	5	9	36
1541 CHLAMYDIA A - C TRACHOMATIS	23		3			2	34	46	108
1556 CMV - CYTOMEGALOVIRUS	3	1	2	28	3	2	9	7	55
1563 CORONAVIRUS				1					1
1564 ROTAVIRUS		3	4	1	1				9
1571 ENTEROVIRUS TYPE 71 (BRCR)				2					2
1599 ENTEROVIRUS TYPING PENDING			19		5	4	10		38
ROSS RIVER VIRUS							25	1	26
SMALL VIRUS (LIKE) PARTICLE						1			1
PARAMYXOVIRUS						1			1
Total	170	15	76	185	48	132	253	154	1,033

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 17/3/83 to 30/3/83 .... 83/7
Viral Identifications by Clinical Information Table 1.
Code 00,99 -No ill or data; 01,02,11,12 -Respiratory; E3 -Encephalitis; M3 -Meningitis; 04 -Paralysis; 05,13 -CNS other unspec.; 07,49 -GI; 17,47 -Hepatic; 19 -CVS; 89 -Urinary; 06 -Skin/mucous.

VIRUS OR VIRAL ANTIGEN	No-ill or data	Respiratory	Encephalitis	Meningitis	Paralysis	CNS other unspec	GI	Hepatic	CVS	Urinary	Skin/mucs memb
0101 ADENOVIRUS TYPE 1.....		3					2				
0102 ADENOVIRUS TYPE 2.....		3					3				
0103 ADENOVIRUS TYPE 3.....				1			1				
0105 ADENOVIRUS TYPE 5.....		1		1			4				
0125 ADENOVIRUS TYPE 25.....							1				
0201 INFLUENZA A VIRUS.....	1	1							1		
0203 INFLUENZA B VIRUS.....		1		1					1		
0302 PARAINFLUENZA VIRUS TYPE 2....		1									
0303 PARAINFLUENZA VIRUS TYPE 3....	3	4									
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....		19									
0500 RHINOVIRUS (ALL TYPES).....		19									1
0600 MYCOPLASMA PNEUMONIAE.....		17		1							
0700 ORNITHOSIS-PSITTACOSIS.....		3									
0901 COXSACKIEVIRUS B1.....				1							
0902 COXSACKIEVIRUS B2.....		1									
0903 COXSACKIEVIRUS B3.....		2		4			2				
1007 ECHOVIRUS TYPE 7.....		1		1							
1011 ECHOVIRUS TYPE 11.....	2	8		52		1	5		1		5
1014 ECHOVIRUS TYPE 14.....	1			2			1				
1017 ECHOVIRUS TYPE 17.....											1
1026 ECHOVIRUS TYPE 26.....				1							
1030 ECHOVIRUS TYPE 30.....				1							
1099 ECHOVIRUS TYPING PENDING.....				1							2
1101 POLIOVIRUS TYPE 1.....							1				
1102 POLIOVIRUS TYPE 2.....	1										
1104 POLIOVIRUS-VACCINAL STRAIN....							2				
1200 MUMPS VIRUS.....	1		2	4							
1301 HERPES SIMPLEX VIRUS NOT-TYPED		2								1	47
1302 EPSTEIN-BARR VIRUS (EB VIRUS).	2										
1303 VARICELLA-ZOSTER VIRUS.....	1										4
1306 HERPES SIMPLEX TYPE 1.....		1								6	20
1307 HERPES SIMPLEX TYPE 2.....	2				1						18
1401 COXIELLA BURNETI.....	1										
1521 MEASLES VIRUS.....		1									1
1522 RUBELLA VIRUS.....											2
1532 HEPATITIS B ANTIGEN.....	47							42			1
1535 HEPATITIS A ANTIBODY.....	4							31			
1556 CMV - CYTOMEGALOVIRUS.....	10	6			1			5		15	1
1563 CORONAVIRUS.....							1				
1564 ROTAVIRUS.....		1				1	8				
1571 ENTEROVIRUS TYPE 71 (BRCR)....				2							
9992 ROSS RIVER VIRUS.....	3										6
9994 SMALL VIRUS (LIKE) PARTICLE...							1				
9996 PARAMYXOVIRUS.....		1									
Total.....	79	96	2	73	2	2	32	78	3	22	109

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 17/3/83 to 30/3/83 ... 83/7
Viral Identifications by Clinical Information Table 2.
Code 10 -Eye; 59 -Genital; 39 -Endo/sal gland;
38 -RES; 29 -Muscle/joint; 69 -Congenital; P8 -PUO;
G8 -Fever/malaise; 09 -Other; A1 -SIDS ...

VIRUS OR VIRAL ANTIGEN	Eye	Genital	Endo/sal gland	RES	Muscle/joint	Congenital	PUO	Fever/malaise	Other	SIDS
0102 ADENOVIRUS TYPE 2.....							1			
0109 ADENOVIRUS TYPE 9.....	2									
0119 ADENOVIRUS TYPE 19.....		3								
0201 INFLUENZA A VIRUS.....							1		1	
0203 INFLUENZA B VIRUS.....								1		
0302 PARAINFLUENZA VIRUS TYPE 2....								1		
0303 PARAINFLUENZA VIRUS TYPE 3....									1	
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....							1	1		
0500 RHINOVIRUS (ALL TYPES).....								1		
0600 MYCOPLASMA PNEUMONIAE.....							1	2		
0903 COXSACKIEVIRUS B3.....									1	
1009 ECHOVIRUS TYPE 9.....							1			
1011 ECHOVIRUS TYPE 11.....							5	13		
1102 POLIOVIRUS TYPE 2.....						1				
1200 MUMPS VIRUS.....				1						
1300 HERPES VIRUS GROUP-NOT TYPED..		1								
1301 HERPES SIMPLEX VIRUS NOT-TYPED		31						3	2	
1302 EPSTEIN-BARR VIRUS (EB VIRUS).				2			1		1	
1306 HERPES SIMPLEX TYPE 1.....	3	18					3			
1307 HERPES SIMPLEX TYPE 2.....		202								
1401 COXIELLA BURNETI.....					1			5		
1522 RUBELLA VIRUS.....						1				
1532 HEPATITIS B ANTIGEN.....									4	
1535 HEPATITIS A ANTIBODY.....								2		
1541 CHLAMYDIA A - C.TRACHOMATIS...	2	106								
1556 CMV - CYTOMEGALOVIRUS.....		6				5	6	3	4	1
9992 ROSS RIVER VIRUS.....					19			14		
Total.....	7	367	3		20	7	20	46	14	1