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Communicable Diseases Intelligence

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A SURVEY OF MYCOBACTERIAL ISOLATES FROM THE PRINCE OF WALES HOSPITAL COMPLEX IN AN 18 MONTH PERIOD 1977-1978 (contributed by M. Abbott, Division of Microbiology, The Prince of Wales Hospital, Sydney)

Positive isolates of mycobacteria were obtained from 154 patients admitted to the hospital complex between January 1977 and June 1978. This figure includes only mycobacterial isolates implicated as the causative agents of infection and excludes casual 'anonymous' mycobacterial isolates. The incidence and type of mycobacteria and the nature of specimen from which they were isolated are shown in the table below.

There were 119 isolates of M. tuberculosis of which 99 were isolated from sputum or other respiratory specimens. Of the isolates, 68 were obtained from Australians of anglo-saxon origin and 51 were isolated from migrants, predominantly of European or Asian extraction. This latter group included 8 Vietnamese refugees.

A consideration of the sex distribution of the sources of the tuberculous isolates showed that 88 (74%) were from males and 31 (26%) were from females. The age of the patients ranged from 19 to 94 years with a mean age of 49. The average age of the Australian group was 58 with 60 of the 68 patients aged over 40. By contrast, the mean age of the migrants group was 37 with only 18 of 51 patients over 40 years.

The incidence of drug-resistant tuberculous infection was low with 10 of the 119 strains isolated being resistant to at least one drug. Four of the eight Vietnamese patients were infected with such strains and seven of the drug-resistant strains were isolated from patients of ethnic origin. One double and one triple resistant strain were isolated. In addition the organism from one Australian patient was resistant to 4 drugs; INH, PAS, ethambutol and rifampicin.

The eight patients found to have Hansen's disease were primarily migrants or had spent long periods in areas endemic for leprosy. All these patients were adults and all responded well to chemotherapy. Infections due to the M. avium complex occurred in 9 adult patients with pulmonary disease and 11 children with cervical lymphadenitis. These children were all Australian-born with ages ranging from 15 months to 10 years of age. Although the lymph node infections usually resolved well, many of the adults had chronic lung disease of several years or more duration which was attributable to the resistance of these organisms to conventional anti-tuberculous drugs. One strain of M. bovis was isolated from a 69 year old Australian male and viable organisms were obtained from two hospital staff members with infected BCG sites of inoculation. Other species of mycobacteria, such as M. kansasii, were isolated no more than once or twice.

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INCIDENCE OF MYCOBACTERIA IN VARIOUS CLINICAL SPECIMENS

Nature of Specimen	M. tuberculosis	M. leprae	M. avium complex	Others
Sputum	99	0	9	5
Urine	2	0	0	0
Lymph Node	2	0	11	0
Lung Tissue	6	0	0	0
Pleural Fluid	5	0	0	0
Skin or Cutaneous Abscesses	4	8	0	2
C.S.F.	1	0	0	0

EDITOR'S NOTE:

The MMWR 22 September 1978 describes an investigation into 5 recent cases of drug resistant tuberculosis in a rural northern Mississippi county, which brings the total of such cases in that area to 19 since 1964. The organisms responsible were resistant to isoniazid, para-aminosalicylic acid and streptomycin. The report describes this outbreak as the first documented community outbreak of drug-resistant tuberculosis.

The strain of Mycobacterium tuberculosis responsible exhibits considerable catalase activity, which is unusual in isoniazid resistant strains. It is felt that retention of catalase activity may explain the apparent virulence of these organisms.

RECENT ISOLATES OF INFLUENZA A (contributed by the staff of Fairfield Hospital, Melbourne)

Strains of Influenza A resembling A/USSR/90/77 have been isolated from four young men in Victoria during the past four weeks. Three of them, aged 15, 17 and 17, live in an Army Camp and presented with a typical 24-hour history of malaise, fever and upper respiratory symptoms.

The fourth man, aged 18, is a student teacher, who lives on a dairy farm. He was admitted to Fairfield Hospital with a 24-hour history of headache, cough and fever. Following lumbar puncture, microscopy of CSF revealed two white cells per μl.

A FATAL CASE OF ECHOVIRUS INFECTION IN THE U.K. (CDR 22 September 1978)

A boy aged 3 years who had mild URTI was found dead in bed on 17 August 1978, two hours after saying he felt unwell. Two neighbours attempted mouth-to-mouth resuscitation without success.

The doctor called to the home noticed that the brother (aged 18 months) was ill and admitted him to hospital. This child had also been suffering from a URTI, and that same day developed a fever. In hospital

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he had a cyanotic attack, but soon made an otherwise uneventful recovery.

Post-mortem examination on 21 August 1978, showed only mild inflammation of the meninges and pericardium, a small area of atelectasis in one lung with some purulent sputum, and cloudy urine from one kidney. Echovirus type 11 was recovered from the throat and urine of the dead child.

The two neighbours developed fever, sore throat and back pain two days after the incident. Echovirus type 11 was isolated from throat swabs taken from them on 22 August 1978. The same virus was also isolated from the faeces of the younger brother. No bacterial pathogens were isolated from throat swabs taken from the dead child, his brother, or the neighbours, or from the CSF, blood or urine of the younger brother. No virus was isolated from the patients' throats. However, a second sample of serum from all four adults showed a significant rise in titre in the CFT, using coxsackie B antigen, which is known to cross react with echovirus.

PENICILLINASE - PRODUCING N. GONORRHOEAE (September 1978)

Four cases of gonorrhea were reported during September caused by penicillinase producing N. gonorrhoeae. All four isolates were made by the State Health Laboratory in Brisbane.

The cases involved a male who had contact with a prostitute in the Phillipines 3 days before attending the V.D. clinic; a male who had contact with a female in Brisbane; a female whose contact was an American sailor; and a male whose contact was the previous lady 3 weeks after the American sailor. Three of the four isolates were also resistant to lincomycin at 10 mcg/ml, and the first was in addition, resistant to cotrimoxazole at 25 mcg/ml.

LEGIONNAIRES DISEASE BACTERIUM (LDB) - TENNESSEE U.S.A.

The MMWR 29 September 1978 reports on a further outbreak of Legionnaires Disease suspected of being associated with an air-conditioning unit (see CDI 78/17). Nine confirmed and 6 presumptive cases of the disease were identified between 12 August and 1 September in a hospital in Memphis, and organisms closely resembling the LBD have been isolated from water from an auxillary air-conditioning cooling tower in the hospital.

SALMONELLA ISOLATES - SEPTEMBER

The decline in the number of cases of human salmonellosis reported to the CDI continued in September with 145 reports being received. This is compared to August with 201, July with 232, June with 316, May with 368 and April with 413 cases. S. typhimurium comprised 41% of the reports for September.

To assist in monitoring the distribution of the salmonellae in Australia, S. typhimurium isolates from humans will be routinely phage-typed by the Microbiological Diagnostic Unit at Melbourne University. Cultures will be forwarded regularly from the 3 other typing laboratories, so that

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isolating laboratories (e.g. hospitals, public health laboratories) are requested to ensure that these cultures are forwarded for identification. Because of this extra step in characterizing these isolates, S. typhimurium figures included each month will be provisional and subject to updating in following issues, of the bulletin. Amended figures for August are included in the tables, as are figures for those isolates typed for September.

Interesting cases in September included: S. cerro in a male, acquired in Spain; S. muenchen 6m infant with recurrent diarrhoea from third day of life; S. muenchen cystitis in a 20 year old male; 2 cases of mother and daughter infection, one case with S. infantis and one with S. potsdam; S. typhi type B1 in a 21 year old male (from blood), thought to be acquired in Bali; S. typhimurium type 44 isolated from faeces and CSF of a 4m infant.

AMENDMENT TO BULLETIN 78/19

The virus tables in the last issue incorrectly listed the 2 cases of milker's nodule as cowpox. This entry should be deleted, and the isolates listed separately at the bottom of the table simply as "pox viruses".

FURTHER REPORT ON INFLUENZA ISOLATES (provided by the Influenza Virus Isolations from the WHO National Influenza Centre, Commonwealth Serum Laboratories (Melbourne))

Since preparation of the Bulletin, the following report has been received:

Influenza type A

The first influenza type A isolate for 1978 was made in February. This was an H1N1 A/USSR/90/77 like virus from a 50-year old female patient who presented with a mild URTI to a clinic in a S.E. suburb of Melbourne. No further influenza A isolations were made until early September when another H1N1 virus was isolated from a throat washing from a middle aged male attending the same clinic. Within a few days, the first isolate was made from one of the student population of the University of Melbourne and to date, a total of 41(H1N1) strains have been isolated from patients attending the University Health Service. Isolations have also been made from a 17-year old schoolgirl and a 19-year old female patient attending a clinic in a N.W. suburb of Melbourne.

Patients have suffered from mild to moderately severe influenza.

Influenza type B

Forty-eight type B isolations have been made from the University of Melbourne, CSL staff and the two clinics previously mentioned. Isolations commenced in late July. Antigenically they all resemble B/Wellington/1/75 but this is not significantly different from B/HK/8/73.

Editor's note: In addition to the above, the I.M.V.S. in Adelaide reports the isolation of one H1N1 strain and 4 influenza B strains in the last week. Clinical cases of influenza have also been reported in Hobart, but it is not yet known if these are of the H1N1 type.

SEROTYPE	TOTAL	NSW & ACT	VIC	QLD	SA	WA	TAS	NT	AGE						CUMULATIV TOTAL
									< 1	1-5	6-15	16-60	> 60	NOT STATED	
S. adelaide	2	1			1				1		1				34
S. agona	1		1									1			7
S. anatum	4	1		1	2				2	1		1			38
S. arechavaleta	1	1								1					1
S. birkenhead	3	2		1					2	1					8
S. blockley	4	1			3					1	1	2			4
S. bovis-morbificans	1		1											1	62
S. bredeney	1					1			1						24
S. cerro	1			1								1			2
S. chester	3	2		1					1					2	46
S. coleypark	1					1			1						2
S. dublin	1		1											1	1
S. eimsbuettel	3							3	1	1		1			6
S. gaminara	1					1								1	1
S. havana	4			1	1	2			2	1		1			41
S. hvittingfoss	1							1	1						9
S. infantis	5		2			2	1			3	1		1		28
S. java	1							1		1					16
S. lansing	1							1				1			9
S. lexington	1					1				1					4
S. litchfield	1					1				1					8
S. muenchen	8	1		2	2			3	4	2		2			48
S. newport	6	2	2	1		1			2	2	1	1			36
S. ohio	1	1										1			7

PERIOD SEPTEMBER

SEROTYPE	TOTAL	NSW & ACT	VIC	QLD	SA	WA	TAS	NT	AGE						CUMULATIV TOTAL
									< 1	1-5	6-15	16-60	> 60	NOT STATED	
S. oranienburg	2	1				1						1		1	14
S. orion	1					1								1	8
S. paratyphi B (type 36 var 3)	1					1								1	11
S. potsdam	3			2	1				1			1		1	13
S. saint-paul	4	1	1			2				1	1	1		1	82
S. singapore	1							1		1					28
S. tennessee	1					1				1					14
S. thompson	1	1										1			4
S. typhi*	2		1			1						1		1	28
S. typhimurium*	59	6	17	5	8	18	1	4	7	21	4	17	2	6	639
S. virchow	7	4		3					1	2		1		3	41
S. weltevreden	1			1								1			9
S. wordsworth	6					5		1	1	3		1		1	38
TOTAL	145	25	26	19	18	40	2	15	30	45	10	36	3	21	-
S. typhi B1	1		1									1			
S. typhi C5	1					1								1	
S. typhimurium) 6)	2			2					1	1					
S. typhimurium) 9)	3				1		1	1		2	1				
S. typhimurium) 22)	1			1					1						
S. typhimurium) 120)	2				1			1		2					
S. typhimurium) 26)	3	1	2							2		1			

HUMAN SALMONELLOSIS CASES

PERIOD SEPTEMBER

SEROTYPE	TOTAL	NSW & ACT	VIC	QLD	SA	WA	TAS	NT	AGE						CUMULATIV TOTAL
									< 1	1-5	6-15	16-60	> 60	NOT STATED	
S. typhimurium) 44)	5		5						2			3			
S. typhimurium) 120)	1		1											1	
S. typhimurium) 135)	8	3	1	1	2			1		4		4			
S. typhimurium) 141)	3				2			1	1	1		1			
S. typhimurium) 170)	2		2						1	1					
S. typhimurium) 179)		3	5	1	2				3	3	2	2	1		
S. typhimurium) 183)	1	1								1					

AMENDMENT TO AUGUST FIGURES : ADD THE FOLLOWING

S. typhimurium	30	18	4	2	6	-	-	-	14	3	4	4		5	

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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			7	1		3	9		20
0101 ADENOVIRUS TYPE 1						2			2
0102 ADENOVIRUS TYPE 2			1			1		1	3
0105 ADENOVIRUS TYPE 5						4			4
0107 ADENOVIRUS TYPE 7				3		2			5
0119 ADENOVIRUS TYPE 19				2					2
0127 ADENOVIRUS TYPE 27	1								1
0130 ADENOVIRUS TYPE 30						1			1
0131 ADENOVIRUS TYPE 31						1			1
0199 ADENOVIRUS TYPING PENDING		2			5	2			9
0201 INFLUENZA A VIRUS	1			4				16	21
0203 INFLUENZA B VIRUS	9	2		10	7		12		40
0301 PARAINFLUENZA VIRUS TYPE 1								2	2
0302 PARAINFLUENZA VIRUS TYPE 2						1	2		3
0303 PARAINFLUENZA VIRUS TYPE 3		2		1	1	7	5	1	17
0304 PARAINFLUENZA VIRUS TYPE 4								1	1
0399 PARAINFLUENZA VIRUS TYPING PENDING						3			3
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)		2	3	2	4	9	3	18	41
0500 RHINOVIRUS (ALL TYPES)				1	4		5	1	11
0600 MYCOPLASMA PNEUMONIAE	18		3	8	3	17	12	5	66
0700 ORNITHOSIS-PSITTACOSIS	1		1					1	3
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED							1		1
0809 COXSACKIEVIRUS A9	1			1					2
0816 COXSACKIEVIRUS A16				1					1
0901 COXSACKIEVIRUS B1				2		1	1		4
0903 COXSACKIEVIRUS B3	1						1		2
1000 ECHOVIRUS NOT TYPED							1		1
1007 ECHOVIRUS TYPE 7	1			2					3
1014 ECHOVIRUS TYPE 14							1		1
1018 ECHOVIRUS TYPE 18				1					1
1021 ECHOVIRUS TYPE 21						2			2

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VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES-CONTINUED

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
1022 ECHOVIRUS TYPE 22						1			1
1023 ECHOVIRUS TYPE 23			1						1
1025 ECHOVIRUS TYPE 25						1			1
1030 ECHOVIRUS TYPE 30		1		3				2	6
1032 ECHOVIRUS TYPE 32			1						1
1099 ECHOVIRUS TYPING PENDING						1			1
1101 POLIOVIRUS TYPE 1				1			1	1	3
1102 POLIOVIRUS TYPE 2	1					1			2
1103 POLIOVIRUS TYPE 3						1			1
1200 MUMPS VIRUS		1	2	3		2	10	1	19
1300 HERPES VIRUS GROUP-NOT TYPED	3			1		1		5	10
1301 HERPES SIMPLEX VIRUS-NOT TYPED	7		11	1	3		21	21	64
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	7	1				1			9
1303 VARICELLA-ZOSTER VIRUS	3		3			2			8
1306 HERPES SIMPLEX TYPE 1	9			16		4			29
1307 HERPES SIMPLEX TYPE 2	20			10		5			35
1401 COXIELLA BURNETI	29			1		1	18		49
1502 PICORNA VIRUS-NOT TYPED								1	1
1514 MOLLUSCUM CONTAGIOSUM						1			1
1521 MEASLES VIRUS	4		5	2	12	2			25
1522 RUBELLA VIRUS				1		1	4	4	10
1532 HEPATITIS B ANTIGEN	2	1	10	21		5	8	1	48
1533 HEPATITIS B ANTIBODY						11	6	14	31
1541 CHLAMYDIA A - TRIC TYPE								10	10
1556 CMV - CYTOMEGALOVIRUS	7	1	6	2	4	1	4	1	26
1562 REOVIRUS (ALL TYPES)								1	1
1564 ROTAVIRUS	6	2	9	4		13		2	36
1599 ENTEROVIRUS TYPING PENDING					3	22			25
Total	131	15	63	105	46	133	125	110	728

DENGUE FEVER — 2

ARBOVIRUS GP B — 1

ROSS RIVER VIRUS — 2

PARVO-LIKE VIRUS — 1

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VIRAL IDENTIFICATIONS CATEGORISED INTO SOURCE SPECIMENS

VIRUS OR VIRAL ANTIGEN	FA	BL	NA	CS	SK	EY	UR	BR	GE	OT	TOTAL
0100 ADENOVIRUS NOT TYPED	7	9	4			1					21
0101 ADENOVIRUS TYPE 1	1		1								2
0102 ADENOVIRUS TYPE 2	1		1				1				3
0105 ADENOVIRUS TYPE 5	1		1				1			1	4
0107 ADENOVIRUS TYPE 7			4								4
0119 ADENOVIRUS TYPE 19						2					2
0127 ADENOVIRUS TYPE 27			1								1
0130 ADENOVIRUS TYPE 30						1					1
0131 ADENOVIRUS TYPE 31	1										1
0199 ADENOVIRUS TYPING PENDING	3		5							1	9
0201 INFLUENZA A VIRUS		2	19								21
0203 INFLUENZA B VIRUS		21	19								40
0301 PARAINFLUENZA VIRUS TYPE 1			2								2
0302 PARAINFLUENZA VIRUS TYPE 2		1	2								3
0303 PARAINFLUENZA VIRUS TYPE 3		4	12							1	17
0304 PARAINFLUENZA VIRUS TYPE 4			1								1
0399 PARAINFLUENZA VIRUS TYPING PENDING			3								3
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)		4	37								41
0500 RHINOVIRUS (ALL TYPES)			11								11
0600 MYCOPLASMA PNEUMONIAE		66									66
0700 ORNITHOSIS-PSITTACOSIS		3									3
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED	1										1
0809 COXSACKIEVIRUS A9				1					1		2
0816 COXSACKIEVIRUS A16					1						1
0901 COXSACKIEVIRUS B1	2		2								4
0903 COXSACKIEVIRUS B3			1	1			1				3
1000 ECHOVIRUS NOT TYPED	1										1
1007 ECHOVIRUS TYPE 7			2							1	3
1014 ECHOVIRUS TYPE 14	1										1
1018 ECHOVIRUS TYPE 18			1								1
1021 ECHOVIRUS TYPE 21	1			1							2
1022 ECHOVIRUS TYPE 22										1	1

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VIRAL IDENTIFICATIONS CATEGORISED INTO SOURCE SPECIMENS-CONTINUED

VIRUS OR VIRAL ANTIGEN	FA	BL	NA	CS	SK	EY	UR	BR	GE	OT	TOTAL
1023 ECHOVIRUS TYPE 23	1										1
1025 ECHOVIRUS TYPE 25	1										1
1030 ECHOVIRUS TYPE 30	1		3	2							6
1032 ECHOVIRUS TYPE 32			1								1
1099 ECHOVIRUS TYPING PENDING				1							1
1101 POLIOVIRUS TYPE 1	2		1								3
1102 POLIOVIRUS TYPE 2	2										2
1103 POLIOVIRUS TYPE 3	1										1
1200 MUMPS VIRUS		12	3	4							19
1300 HERPES VIRUS GROUP-NOT TYPED		3			5				3		11
1301 HERPES SIMPLEX VIRUS-NOT TYPED		14	7	1	16				22	1	61
1302 EPSTEIN-BARR VIRUS (EB VIRUS)		9									9
1303 VARICELLA-ZOSTER VIRUS		8									8
1306 HERPES SIMPLEX TYPE 1			8		8	2			9		27
1307 HERPES SIMPLEX TYPE 2									33		33
1401 COXIELLA BURNETI		49									49
1502 PICORNA VIRUS-NOT TYPED	1										1
1514 MOLLUSCUM CONTAGIOSUM									1		1
1521 MEASLES VIRUS		10	13			1					24
1522 RUBELLA VIRUS		9									9
1532 HEPATITIS B ANTIGEN		47									47
1533 HEPATITIS B ANTIBODY		31									31
1541 CHLAMYDIA A - TRIC TYPE									10		10
1556 CMV - CYTOMEGALOVIRUS		14	4				8		1		27
1562 REOVIRUS (ALL TYPES)	1										1
1564 ROTAVIRUS	36					1					36
1599 ENTEROVIRUS TYPING PENDING	22		2							1	25
Total	88	316	171	11	30	7	11		80	7	721

DENGUE FEVER ——— 2

ARBOVIRUS Gp B ——— 1

ROSS RIVER VIRUS ——— 2

PARVO-like VIRUS ——— 1