AUSTRALIA Communicable Diseases Intelligence

Bulletin Number 79/12
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Virus reports this period. Total 702 (Total last period : 750)

Interesting reports include:

Influenza A: In addition to the increasing number of reports of Influenza A in the virus tables, the Commonwealth Serum Laboratories in Melbourne have made a further 50 isolations since those reported in Bulletin 79/9.

13 of these isolates resembled A/USSR/90/77 while the remaining 37 resembled A/Brazil/11/78. All were from young people, mainly from the Student Health Clinic of the University of Melbourne.

(The virus tables in Bulletin 79/11 recorded 9 Influenza A (H3N2) isolates from the Royal Children's Hospital, Melbourne. This was incorrectly coded. These cases were all Influenza A(H1N1)

Ross River Virus: 11 reports this period. This represents a decline over the number of cases in previous weeks (79/11 24; 79/10 26; 79/9 47) and a continuation of the downward trend.

This infection was far more prevalent in 1979 than last year. During 1978, 100 cases were reported to the CDI while in the period 1 January 1979 to 30 May 1979, 360 cases have been recorded. The breakdown by States is Qld 277, N.S.W. 47, S.A. 18, and W.A. 18. The infection is characterized by polyarthritis and rash.

Although the comparison between 1978 and the 1979 figures suggests a rather dramatic increase in incidence, compensation should be made for possible reporting differences between these periods. Minor differences can be identified in this instance.

The Bulletin is compiled and distributed by the Environmental Health Branch, Department of Health, P.O. Box100, Woden, A.C.T. 2606, Australia, and is available on request. Contributions are solicited, and do not preclude later publication elsewhere.

Honey and Clostridium botulinum (contributed by C. Murray, Food Hygiene Laboratory, Institute of Medical and Veterinary Science, Adelaide)

Honey has been implicated as a source of Clostridium botulinum in cases of infant botulism. Surveys of honey in the U.S.A. have found Clostridum botulinum spores in honey samples, one survey finding 18 positives out of 241 tested. Clostridium botulinum is a normally occurring soil organism and could therefore be expected to be found in honey due to environmental contamination during its production. Honey is not subjected to any processing which will affect bacterial spores. Because of its low water activity, honey does not allow the growth of bacteria and hence is a stable product.

Fifty honey samples were examined in the Food Hygiene Laboratory at the Institute of Medical and Veterinary Science, Adelaide. The samples were collected by the S.A. Health Commission and represented the range of honey available:

Australian Bulk Honey	- 18 samples
Australian Honey in Retail Packs	- 20 samples
Imported Retail Packs of Honey	- 12 samples

Fifty and 100 grams were each were inoculated into 900 mls of Anaerobic Broth and incubated at 30°C for 7 days. Supernatants from these broths were inoculated into mice for the detection of Botulinum toxin. Trypsin treated supernatants were also inoculated into mice.

Of the 50 samples tested, none showed toxin production by this method.

The broths were plated out and any anaerobic gram positive rods were identified in the Anaerobic Laboratory at the I.M.V.S. by biochemical tests and Gas-Liquid Chromatography. A variety of Clostridium species were identified but none resembled Clostridium botulinum.

Campylobacter spp isolates - Rockhampton (contributed by W.C. Jamieson, Commonwealth Health Laboratory, Rockhampton, Queensland)

Over the 12 month period June 1978 to May 1979 this laboratory has isolated Campylobacter fetus s.s. jejuni from 33 patients. The selective medium of Skirrow was used and plates were incubated at 43°C in air-tight jars with anaerobic "Gas-Paks" but without catalyst.

The age range of the patients was six months to 41 years with 24 of the patients less than six years of age.

The predominant feature in most cases was diarrhoea; some with blood, while a few cases presented with vomiting also. Some patients presented with abdominal pain only.

It would appear from this and other reports that efforts to isolate campylobacters by laboratories will be well rewarded.

Viral infections - Fiji

Bulletin 79/11 reported that 6,000 cases of dengue fever had been recorded in Fiji up to 15 May 1979. Further advice has been received from the WHO office in Fiji to the effect that a combined fever epidemic comprising influenza, dengue and Ross River Virus infections has been occurring since January 1979 in that area.

The total number of cases reported since January by government hospitals and clinics is 31,316. The epidemic is presumed to have reached its peak in May in the Western and Central districts of Suva. Epidemiological and vector studies are being undertaken together with an intensive mosquito eradication campaign. This has involved widespread spraying of the Central Districts with "Malathion ULV" and the larviciding of large tracts of marshy and other coastal areas with "Malathion EC50".

The detection of Ross River Virus infections outside Australia is unusual, and previously has occurred in only Indonesia and New Guinea. This is the first time that the infection has been recorded in the South Pacific. Although the majority of cases in Fiji have been diagnosed by HI using antigen from Brisbane, diagnosis has also been by CFT using mouse brain antigen prepared from a virus isolated from two patients. This was performed by Professor Miles (Dunedin) and Dr Mataika (Suva Virus Laboratory).

Salmonella infections - April (from the monthly report of the Microbiological Diagnostic Unit, University of Melbourne)

S. typhi phage type untypable isolated from blood cultures and faeces of 3 year old male Vietnamese refugee who arrived in Australia with fever, diarrhoea and vomiting. No other isolations were made from his family or other refugees who travelled on the same plane from the same overseas camp. (Vic.-Apr.)

S. typhi phage type untypable isolated from faeces of 24 year old male with fever and diarrhoea. He had travelled with a group in Indonesia and was the only one to drink water. No others from the group contracted typhoid. (N.S.W.-Apr.)

S. typhi phage type degraded isolated from a female patient in Thursday Island hospital. (Qld.-Apr.)

S. tyhimurium phage type 9 was isolated at the Launceston General Hospital from adults who had eaten at a restaurant at a nearby town. A nine month old male acquired the infection as a secondary case from his mother. A veal goulash dish and salad was common to all patients. S. typhimurium phage type 9 was also isolated from 2 patients in Burnie and one in Hobart but no history was given as to whether they were part of the food poisoning outbreak. (Tas.-Apr.)

HOSPITAL OUTBREAK S.A. - follow up to outbreak reported in Bulletin 79/10

(S. typhimurium phage type 12A)

A further 16 patients have become infected with S. typhimurium phage type 12A. Eleven of the patients had multiple antibiotic resistant strains (ampicillin, tetracycline, chloramphenicol, sulphonamide, kanamycin), three were resistant to tetracycline, sulphonamide, kanamycin only one was sensitive to all antibiotics, and one patient had both the sensitive and the multiple resistant strains from faeces and the multiple resistant strain from blood culture. Two patients mentioned in the previous report were still excreting the resistant strain.

Q fever in Victoria: follow-up report (taken from the monthly report of the Medical Director, Fairfield Hospital, Melbourne)

Earlier this year, two abattoir workers from Donald (Vic.) were admitted to Fairfield Hospital with fever and subsequently shown to have Q fever (CDI 79/9). Recent infection has been confirmed in nine inpatients, all of whom were workers associated with the meat industry, two from Donald and the others from various Melbourne abattoirs. Sera received from five other abattoir workers in Melbourne have also indicated recent infection with Q fever. Paired sera from 79 abattoir workers at Donald have been examined, 33 showing evidence of recent infection and 2 evidence of past infection with Q fever. These infections appear to be associated with the slaughter of wild goats which have been acquired from Queensland.

β-lactamase producing N. gonorrhoeae

A further two isolates of the above organism have been reported from Melbourne. These were from two males, one aged 21 years, who acquired their infections in Manila.

Amendment to Bulletin 79/11

Page 3, line 11. Replace "isolations" with "identifications". Similarly in line 22.

Serological prevalence of hepatitis A (HAV) and hepatitis B (HBV) markers in narcotic abusers in Sydney (contributed by C.R. Boughton and R.A. Hawkes, Prince Henry Hospital and University of New South Wales)

As part of a longitudinal study of the epidemiology of viral hepatitis in several population groups both in Sydney and in the Territory of Papua New Guinea, a survey was made of individuals using illicit injections of 'hard' drugs of addiction, attending a Sydney drug referral centre. Specimens of sera were obtained from each attendee and were submitted for liver function tests and the determination of hepatitis A virus (HAV) and hepatitis B virus (HBV) serological status ('Havab' for total anti-HAV, 'Ausria II' for HBsAg, 'Ausab' for anti-HBs and 'Coreab' for anti-HBc; Abbott Laboratories). One hundred and forty-one drug abusers were compared with 122 non-hepatitic controls of similar age and ethnic origin.

Questionnaire information was obtained from each person: A history of a past attack of viral hepatitis was obtained in 39% of drug abusers (55/141) compared with 11.5% of controls (14/121), ($p < 0.01$). 38.3% of drug abusers (55/141) had had a prior admission to either a gaol or psychiatric institution, compared with none of the controls ($p < 0.001$). All of the drug group had used illicit injections within the preceding six months and almost all had shared the use of needles and syringes.

Fifty per cent of the control group had a history of parenteral inoculation within the preceding six months, but none of these injections was illicit. Because of the high rate of injections in the controls, it is apparent that the nature and circumstances of parenteral inoculation need to be known before its possible relevance to hepatitis virus transmission in a given situation can be determined.

Hepatitis A markers:

TABLE 1.
Age Specific Prevalence Rates of Anti-HAV.

Age Group	Drug Group			Control Group		
	Pos.	Total	% Pos.	Pos.	Total	% Pos.
15-19	6	21	28.6	12	26	46.1
20-24	47	90	52.2	16	36	44.4
25-34	13	30	43.3	31	60	51.7
	66	141	46.8	59	122	48.4

Comment: It did not appear that drug taking had significantly influenced prevalence rates of anti-HAV in the group studied.

Hepatitis B markers:

Seventy-five percent (106/141) of drug abusers possessed one or more of the HBV markers, compared to 13% (16/122) controls. The distribution of individual markers is presented in Table 2.

TABLE 2.

Distribution of HBV Markers

HBV Marker	Drug Group	Control Group
HBsAg	17*	0
Anti-HBs only	1	2
Anti-HBc only	48	9
Anti-HBs) Anti-HBc) both	40	5
HBV Seropositive	106	16
HBV Seronegative	35	106
TOTAL	141	122

*Eleven of these were subtyped. Ten were "ay" and one was "ad".

Comment: The importance of determining anti-HBc as an HBV serological marker is evident; anti-HBc was approximately twice as common as anti-HBs as a marker of past HBV infection. If anti-HBc had not been tested for, half of the previously HBV-infected population would have been missed. However, the presence of anti-HBc in so many controls without any evidence of liver malfunction casts some doubt on its validity as an indicator of persistent HBV replication or of only recent HBV infection in such subjects.

Hepatitis non-A/non-B:

Of the 49 drug abusers who had evidence of viral hepatitis, seven (14%) were seronegative for all A and B markers and were possibly suffering from hepatitis non-A/non-B infection.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 31-5-79 . 13-6-79 BULLETIN NUMBER . 79/12

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	4			4		6	7		21
0101 ADENOVIRUS TYPE 1					2	2			4
0102 ADENOVIRUS TYPE 2				2	1	3		1	7
0103 ADENOVIRUS TYPE 3				1	1				2
0105 ADENOVIRUS TYPE 5				1	2	1			4
0106 ADENOVIRUS TYPE 6			2						2
0107 ADENOVIRUS TYPE 7				2	4			1	7
0111 ADENOVIRUS TYPE 11	1								1
0119 ADENOVIRUS TYPE 19								1	1
0199 ADENOVIRUS TYPING PENDING		1			9	5			15
0201 INFLUENZA A VIRUS	3			12	7	1	22		45
0203 INFLUENZA B VIRUS					2				2
0204 INFLUENZA C VIRUS							1		1
0301 PARAINFLUENZA VIRUS TYPE 1	4	8		2	10	7	2	1	34
0302 PARAINFLUENZA VIRUS TYPE 2					1	3	3		7
0303 PARAINFLUENZA VIRUS TYPE 3					2	9	2		13
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)		1		4	13		5	5	28
0500 RHINOVIRUS (ALL TYPES)				6	2	3			11
0600 MYCOPLASMA PNEUMONIAE	13	2		1		5	20	2	43
0700 ORNITHOSIS-PSITTACOSIS	3					2			5
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED							1		1
0809 COXSACKIEVIRUS A9				2					2
0816 COXSACKIEVIRUS A16	1								1
0903 COXSACKIEVIRUS B3	1	1				1			3
0904 COXSACKIEVIRUS B4	3								3
1000 ECHOVIRUS NOT TYPED							3		3
1005 ECHOVIRUS TYPE 5				1					1
1011 ECHOVIRUS TYPE 11								19	19
1022 ECHOVIRUS TYPE 22				1		1			2
1024 ECHOVIRUS TYPE 24				1					1
1027 ECHOVIRUS TYPE 27	1								1

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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
1030 ECHOVIRUS TYPE 30				2		2			4
1033 ECHOVIRUS TYPE 33						2			2
1101 POLIOVIRUS TYPE 1						1		1	2
1102 POLIOVIRUS TYPE 2				2					2
1200 MUMPS VIRUS	1	1	1	2	1		4		10
1300 HERPES VIRUS GROUP-NOT TYPED	2			1		1			4
1301 HERPES SIMPLEX VIRUS-NOT TYPED	7		6	1	4	1	14	34	67
1303 VARICELLA-ZOSTER VIRUS						1	2	1	4
1306 HERPES SIMPLEX TYPE 1	3			16		13			32
1307 HERPES SIMPLEX TYPE 2	21			23		7			51
1399 HERPES VIRUS TYPING PENDING	1					2			3
1401 COXIELLA BURNETI	3			22		1	15		41
1512 VACCINIA VIRUS							1		1
1514 MOLLUSCUM CONTAGIOSUM								1	1
1515 CONTAGIOUS PUSTULAR DERMATITIS (ORF VIRUS)						1			1
1522 RUBELLA VIRUS						2	1		3
1532 HEPATITIS B ANTIGEN	3		9	44		5	5	9	75
1535 HEPATITIS A ANTIBODY						1		1	2
1541 CHLAMYDIA A - TRIC TYPE						2		22	24
1555 PAPOVAVIRUS GROUP (PAPILLOMA-HUMAN WART)	1								1
1556 CMV - CYTOMEGALOVIRUS	7	1		9	2	5	1	4	29
1562 CORONAVIRUS				1					1
1564 ROTAVIRUS	16		3	4		4			27
1571 ENTEROVIRUS TYPE 71 (BRCR)				1					1
1599 ENTEROVIRUS TYPING PENDING		2			5	3			10
ROSS RIVER VIRUS							11		11
PARVOVIRUS (LIKE)	2								2
Total	101	17	21	168	68	103	120	103	701

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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	14	4	2			1					21
0101 ADENOVIRUS TYPE 1	2		2								4
0102 ADENOVIRUS TYPE 2	1		5			1					7
0103 ADENOVIRUS TYPE 3	1		2								3
0105 ADENOVIRUS TYPE 5	2		2								4
0106 ADENOVIRUS TYPE 6						2					2
0107 ADENOVIRUS TYPE 7	1		3			3					7
0111 ADENOVIRUS TYPE 11			1								1
0119 ADENOVIRUS TYPE 19									1		1
0199 ADENOVIRUS TYPING PENDING	5		6		1	2					14
0201 INFLUENZA A VIRUS		11	34								45
0203 INFLUENZA B VIRUS			2								2
0204 INFLUENZA C VIRUS		1									1
0301 PARAINFLUENZA VIRUS TYPE 1			31			1		1		1	34
0302 PARAINFLUENZA VIRUS TYPE 2		3	4								7
0303 PARAINFLUENZA VIRUS TYPE 3	1	3	9								13
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)		2	26								28
0500 RHINOVIRUS (ALL TYPES)			11								11
0600 MYCOPLASMA PNEUMONIAE		43									43
0700 ORNITHOSIS-PSITTACOSIS		5									5
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED			1								1
0809 COXSACKIEVIRUS A9	1			2							3
0816 COXSACKIEVIRUS A16					1						1
0903 COXSACKIEVIRUS B3	1			1	1						3
0904 COXSACKIEVIRUS B4			1						1		2
1000 ECHOVIRUS NOT TYPED	2		1								3
1005 ECHOVIRUS TYPE 5			1								1
1011 ECHOVIRUS TYPE 11	8		8	3						1	20
1022 ECHOVIRUS TYPE 22	1		1								2
1024 ECHOVIRUS TYPE 24			1	1							2
1027 ECHOVIRUS TYPE 27			1								1
1030 ECHOVIRUS TYPE 30	4										4

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REPORTING PERIOD - 31-5-79 - 13-6-79 BULLETIN NUMBER - 79/12
VIRAL IDENTIFICATIONS CATEGORISED INTO SOURCE SPECIMENS-CONTINUED

VIRUS OR VIRAL ANTIGEN	FA	BL	NA	CS	SK	EY	UR	BR	GE	OT	TOTAL
1033 ECHOVIRUS TYPE 33	1		1								2
1101 POLIOVIRUS TYPE 1			2								2
1102 POLIOVIRUS TYPE 2	1		1								2
1200 MUMPS VIRUS		6	2	3			1				12
1300 HERPES VIRUS GROUP-NOT TYPED					3				1		4
1301 HERPES SIMPLEX VIRUS-NOT TYPED		3	8	1	20	1			27	6	66
1303 VARICELLA-ZOSTER VIRUS		3			1						4
1306 HERPES SIMPLEX TYPE 1		1	11		14				7	1	34
1307 HERPES SIMPLEX TYPE 2			1		3				47		51
1399 HERPES VIRUS TYPING PENDING					2				1		3
1401 COXIELLA BURNETI		41									41
1512 VACCINIA VIRUS			1								1
1514 MOLLUSCUM CONTAGIOSUM										1	1
1515 CONTAGIOUS PUSTULAR DERMATITIS (ORF VIRUS)					1						1
1522 ROBELLA VIRUS		3									3
1532 HEPATITIS B ANTIGEN		75									75
1535 HEPATITIS A ANTIBODY		2									2
1541 CHLAMYDIA A - TRIC TYPE						1			23		24
1555 PAPOVAVIRUS GROUP (PAPILLOMA-HUMAN WART)		1									1
1556 CMV - CYTOMEGALOVIRUS		8	10				8		4	1	31
1562 CORONAVIRUS			1								1
1564 ROTAVIRUS	27										27
1571 ENTEROVIRUS TYPE 71 (BRCR)			1								1
1599 ENTEROVIRUS TYPING PENDING	5		4				1				10
ROSS RIVER VIRUS		11									11
PARVOVIRUS	2										2
Total	80	226	198	11	47	12	10	1	112	11	708