

3 August 1979

Virus reports this period - 950 - with reports from one laboratory still to be received. This is the highest number ever received for a fortnightly period.

As communications recover following settlement of the postal dispute, the laboratory reports for the previous two periods are now being received. However the reports that have arrived have not been included in the statistics for the current period. They will however be incorporated into the appropriate quarterly totals which will be sent out to collaborating laboratories in the near future. Copies will be forwarded to other persons on request.

Reports of interest:

- . Influenza B - 14 reports (5 and 1 in the previous two periods)
- . Respiratory syncytial virus - 147 reports (99 and 52 previously)
- . Adenovirus type 19 - 9 reports - all from Western Australia, as were the 4 last period and 5 of 7 for the period before.
- . Coxsackie virus type B4 - 15 reports (79/14:2, 17/13:1)

Two of the isolations were from autopsy heart and lung specimens from a 1 month old baby in Western Australia whose mother had had a non-rubella rash during early pregnancy. The baby had been unwell since birth with a low grade pyrexia and myocarditis.

Two others were from "cot-death" babies. There were only 27 isolations of this strain reported during the whole of 1978.

- . Rotavirus - 46 reports (79/14:14, 79/13:9)

Abbreviations in tables

For persons unfamiliar with the abbreviations used in the attached virus tables, those in the "source specimens" table are:-

FA	faeces/rectal swab	EY	eye
BL	blood/serum	UR	urine
NA	nasopharyngeal swab or aspirate	BR	bronchial washings or aspirate
CS	cerebrospinal fluid	GE	genital swab
SK	skin	OT	other

Ross River Virus infections imported from Fiji

In the previous issue (CDI 79/14) mention was made of the possible importation of two cases of Ross River Virus infection from Fiji. Subsequent information substantially strengthens this possibility. Travel itineraries and laboratory results for several cases are given below, with additional clinical details on one of the cases.

No.	<u>Sex & age</u>	<u>Domicile</u>	<u>In Fiji (1979)</u>	<u>Onset of symptoms</u>	<u>Date of sample(s)</u>	<u>Laboratory results (Ross River antigen)</u>
1.	F 27	Brisbane	Early May	18/5	22/5 4/6	HI 1:80 1:320
2.	F 24	Brisbane	30/4-13/5	17/5	18/5 31/5 25/6	HI 1:20 1:640 1:320
3.	M 44	Sydney	5/5-20/5	21/5	22/5 14/6	HI 1:80 1:640
4.	M 59	Sydney	21/4-2/5	Approx. 8/5	18/5	HI 1:640 Specific IgM + ve
5.	M 47	Brisbane	14/5-20/5	27/5	14/6	HI 1:160 Specific IgM + ve
6.	F 39	Sydney	2/5-16/5	24/5 or 25/5	6/6	HI 1:1280
7.	F 45	Melbourne	30/3-4/4	10/4	15/4 3/5	HI 1:160 1:160 Specific IgM + ve

It will be seen that in all patients except the sixth there is evidence either of a four-fold rise in titre or the presence of specific IgM. As in the sixth patient the single available titre is so high, the diagnoses of Ross River Virus infection may all be regarded as confirmed.

A typical clinical history is that of patient no.7 who developed a painful left wrist and right little finger on 10 April. Two days later she developed a maculo-papular rash, polyarthritis involving all finger joints of the right hand and increased pain and swelling of the left wrist. There was no significant fever but she did have some headaches.

She was investigated at Fairfield Hospital on 15 April. Full blood examination, thick and thin films for malaria, blood cultures, nose and throat swabs for haemolytic streptococci, and serum tests for rheumatoid factor, electrolytes, creatinine and urea were all normal. ESR was 13mm during the first hour.

By 3 May, all joint symptoms had improved, although the left wrist and right little finger were still slightly painful and swollen. The right knee had become slightly painful. Blood examination showed a slight decrease in haemoglobin from 13.2 g/dl previously to 11.4 g/dl and a mild leucocytosis, rising from $5.0 \times 10^9/l$ to $7.0 \times 10^9/l$, with 63% of

neutrophils segmented, and some toxic granulation. The ESR had risen to 30 mm. Antibody serology for Group B arboviruses, done at the same time as the Ross River tests, and using Murray Valley Encephalitis as antigen, gave titres of less than 1:20 on each occasion.

As the patient's husband had accompanied her to Fiji, his serum was similarly investigated for arbovirus infection with negative results (titres less than 1:20).

Patients 2, 3, 6 and 7 all reported knowing of other people who had been in Fiji at the same time and had had similar symptoms following their return to Australia. Details are not available however. Samples from some of the patients listed had been submitted with a tentative diagnosis of dengue fever. Rubella was also considered in relation to the last patient, but as she gave a history of both clinical disease "many years previously" and a positive test for antibody in 1963, further testing was not thought necessary.

Studies both in the Murray Valley (2) and the New South Wales coastal area (3) have shown wide variations in antibody levels to the Ross River Virus, both in cases diagnosed as epidemic polyarthrititis and in random samples of the population in endemic areas following an epidemic. Although rapid falls in titre have been demonstrated between the fourth and sixth weeks after onset of symptoms (3) there are indications that antibodies do persist for longer periods in endemic areas - presumably due to repeated and possibly sub-clinical infections. A study in the Echuca area in the Murray Valley, for example, reported that the proportion of persons with antibodies to the Group A arboviruses rose in linear relationship with age (4).

The main mosquito vectors of the Ross River Virus in Australia are thought to be:

Culex annulirostris - a member of the banded proboscis group of Culex mosquitoes which occurs throughout mainland Australia. The normal breeding site is fresh (occasionally brackish) ground water ranging from permanent swamps to temporary ground pools, usually with vegetation present. It bites mainly in the evenings.

Aedes vigilax - is typically a coastal species from all over the mainland associated with estuaries, salt marsh and mangrove swamps, where it is found breeding in isolated brackish ground pools. It is also found inland in the Mildura area in ground pools, where the water often has a high salt content. This species feeds both during the day-light hours and in the evenings.

C. annulirostris and A. vigilax are both known to occur in Fiji although there is no evidence available to date as to which mosquitoes are the vectors in that country. In view of the large number of human cases of Ross River Virus infections thought to be occurring in Fiji, it is possible that a man/mosquito/man cycle may have been established, as opposed to man being infected incidentally during the zoonotic cycle.

As a precaution it is suggested that travellers to Fiji be advised to take strict preventive measures against mosquito bites both during daylight hours and in the evenings.

(Acknowledgements - Information on cases provided by: Fairfield Hospital, Melbourne; State Health Laboratory, Brisbane; Dr R. Fulton, Sydney; Dr P. Roche, UML Laboratories, Sydney; Dr G. Brugler, David Sugerman Pathology Laboratories, Sydney.)

References

- (1) Benenson A.S. (Ed), Control of Communicable Diseases in Man, 12th edition APHA 1975.
- (2) Seglenieks Z. and Moore B.W. Med. J. Aust. (1974) 2:552-556.
- (3) Clarke J.A., Marshall I.D. and Gard G. Amer. J. Tr. Med. and Hyg. (1973) 22:4, 543-550.
- (4) The Echuca-Melbourne Collaborative Group. Med. J. Aust. (1976) 1:257-259.

Salmonella isolations (from the monthly report for May from the Microbiological Diagnostic Unit, University of Melbourne)

- S. typhi phage type E₁ isolated from blood of 13 year old boy with history of fever and diarrhoea who had arrived one week before from India. (Vic - May)
- S. typhi phage type 37 isolated from faeces from newly arrived 46 year old Vietnamese refugee. An untypable strain was also isolated. (Vic - May)
- S. typhi untypable isolated from blood and faeces of 52 year old male who had returned from a trip to S.E. Asia with a P.U.O. (W.A. - May)
- S. typhi phage type degraded isolated from faeces (and also blood) of a 24 year old Italian sailor who had had diarrhoea for several weeks. (W.A. - Mar)
- S. typhi untypable isolated from faeces of 22 year old Indian sailor. Symptoms developed 2 weeks earlier after calling at Bombay. (W.A. - May)
- S. typhimurium phage type 21 isolated from bilateral ear discharge from a 9 month old child with 3 days rash but otherwise well. Unfortunately follow up of faecal culture was not available. (Vic - May)

Yellow Fever

The World Health Organization has confirmed that Trinidad Island is no longer on the list of countries currently infected with yellow fever. (WER 22 June 1979). Valid certificates are still required from all travellers aged over 1 year, arriving in Australia, who within the previous 6 days, have been in Trinidad.

The countries that are currently infected were listed in CDI 79/13.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 12-7-79 - 25-7-79 BULLETIN NUMBER - 79/15
 VIRAL IDENTIFICATIONS CATEGORISED INTO SOURCE SPECIMENS-CONTINUED

VIRUS OR VIRAL ANTIGEN	FA	BL	NA	CS	SK	MT	UR	BR	SE	OT	TOTAL
1022 ECHOVIRUS TYPE 22.....	3		2								5
1030 ECHOVIRUS TYPE 30.....			1	2							3
1033 ECHOVIRUS TYPE 33.....	1										1
1101 POLIOVIRUS TYPE 1.....	3		2							2	7
1102 POLIOVIRUS TYPE 2.....	4		2								6
1103 POLIOVIRUS TYPE 3.....	1		3								4
1104 POLIOVIRUS-VACCINAL STRAIN.....	7		2								9
1200 MUEPS VIRUS.....		12	2	2							16
1300 HERPES VIRUS GROUP-NOT TYPED.....			3		3				4		10
1301 HERPES SIMPLEX VIRUS-NOT TYPED.....		8	14		28	1			37	4	92
1303 VARICELLA-ZOSTER VIRUS.....		1		1	2						4
1306 HERPES SIMPLEX TYPE 1.....			4		12	2			8	2	28
1307 HERPES SIMPLEX TYPE 2.....					4				73		77
1399 HERPES VIRUS TYPING PENDING.....					2				1		3
1401 COXIELLA BURNETI.....		31									31
1515 CONTAGIOUS PUSTULAR DERMATITIS (ORF VIRUS).....					2						2
1521 MEASLES VIRUS.....		5	2								7
1522 RUBELLA VIRUS.....		9									9
1530 HEPATITIS A VIRUS.....		1									1
1532 HEPATITIS B ANTIGEN.....		56									56
1535 HEPATITIS A ANTIBODY.....		2									2
1541 CHLAMYDIA A - TRIC TYPE.....					1	4			43		48
1556 CMV - CYTOMEGALOVIRUS.....		4	16				12		6	2	40
1564 ROTAVIRUS.....	46										46
1566 NORWALK AGENT.....	1										1
1571 ENTEROVIRUS TYPE 71 (BRCR).....	5		4								9
1599 ENTEROVIRUS TYPING PENDING.....	14		9								23
ROSS RIVER VIRUS.....		11									11
PARVOVIRUS.....	6										6
Total.....	143	247	302	7	54	11	12	2	180	14	972

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 12-7-79 - 25-7-79 BULLETIN NUMBER - 79/15
 VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES-CONTINUED

VIRUS OR VIRAL ANTIGEN	ICMHE	MASC (NSW)	PRH/ FOR	PAIB- FIELD	BCA (VIC)	IAMS (SA)	STATE	STATE	Total
	(NSW)/ VVH (ACT)		(NSW)	(VIC)			(VIC)	LAB (QLD)	
1021 ECHOVIRUS TYPE 21.....						1			1
1022 ECHOVIRUS TYPE 22.....				1		2			3
1030 ECHOVIRUS TYPE 30.....	2			1					3
1033 ECHOVIRUS TYPE 33.....						1			1
1101 POLIOVIRUS TYPE 1.....						3	1	3	7
1102 POLIOVIRUS TYPE 2.....	1	1				3	1		6
1103 POLIOVIRUS TYPE 3.....				1		1		2	4
1104 POLIOVIRUS-VACCINAL STRAIN.....						8			8
1200 HMPHS VIRUS.....	4	1		3			4	3	15
1300 HERPES VIRUS GROUP-NOT TYPED.....	6					3		1	10
1301 HERPES SIMPLEX VIRUS-NOT TYPED.....	10			2	6	1	26	42	87
1303 VARICELLA-ZOSTER VIRUS.....	1					2	1		4
1306 HERPES SIMPLEX TYPE 1.....	5	2		16		4			27
1307 HERPES SIMPLEX TYPE 2.....	33			25		15			73
1399 HERPES VIRUS TYPING PENDING.....						2		1	3
1401 COXIELLA BURNETII.....	5			15		2	10	1	33
1515 CONTAGIOUS PUSTULAR DERMATITIS (OLF VIRUS).....				2					2
1521 MEASLES VIRUS.....	4			3					7
1522 RUBELLA VIRUS.....	1			4		3		1	9
1530 HEPATITIS A VIRUS.....								1	1
1532 HEPATITIS B ANTIGEN.....				27		11	7	11	56
1535 HEPATITIS A ANTIBODY.....						2			2
1541 CHLAMYDIA A - TRIC TYPE.....	19					4		24	47
1556 CMV - CYTOMEGALOVIRUS.....	1			16	1	4	6	5	33
1564 ROTAVIRUS.....	14	13		6	2	10		1	46
1566 BOBWALK AGENT.....	1								1
1571 ENTEROVIRUS TYPE 71 (BACH).....					7				7
1599 ENTEROVIRUS TYPING PENDING.....		1				17	3	1	22
ROSS RIVER VIRUS.....						1	10		11
PARVOVIRUS (LIKE).....	6								6
Total.....	167	43		168	123	122	155	175	953

NOTIFIABLE DISEASES REPORTED IN AUSTRALIA

.6th 4 Weekly Period for .1979..

79/15

BULLETIN

19.05.79 to 15.06.79 incl.

DISEASE	Total	N.S.W.	VIC	QLD	S.A.	W.A.	TAS.	N.T.	A.C.T.	CUMULATIVE TOTAL TO DATE FOR YEAR
Amoebiasis	3		1		1	1				8
Ankylostomiasis										71
Anthrax	1	1								1
Arbovirus infection	9		3	5		1				45
Brucellosis	2				2					32
Campylobacter infections										-
Chancroid	7			7						12
Cholera										-
Congenital rubella syndrome										-
Diphtheria										-
Donovanosis	6			6						16
Giardiasis										-
Genital herpes										-
Gonococcal ophthalmia neonatorum										-
Gonorrhoea	1042	249	221	289	103	78	12	64	26	5779
Hepatitis A (infectious)	168	59	43	20	5	3	3	28	7	1025
Hepatitis B (serum)	51	3	25	7	12	4		1	1	371
Hepatitis - unspecified	6					6				*39
Hydatid disease	2		1						1	10
Lassa Fever										-
Legionnaires disease										-
Leprosy	3	2				1				25
Leptospirosis	1		1							34
Lymphogranuloma venereum										1
Malaria	32	4	12	9	1	1	1		4	*148
Marburg Disease										-
Meningococcal infections	9		1	7	1					35
Non-specific urethritis										-
Ornithosis	2	1			1					8
Pertussis (whooping cough)	12		12							142
Plague										-
Poliovelitis										-
Q. fever	132	3	71	52	6					*264
Rabies										-

1979 ENTEROVIRUS TYPING RESULTS
 ROSS RIVER VIRUS
 PARVOVIRUS (LIKE)
 Total

11
6
101
151
122
251
163
43
6
167

DISEASE	Total	N.S.W.	VIC	QLD	S.A.	W.A.	TAS.	N.T.	A.C.T.	CUMULATIVE TOTAL TO DATE NR YEAR
Salmonella infections	66		3	7	19	14		22	1	1173
Shigella infections	26			5		9		12		280
Smallpox										-
Syphilis	312	65	4	183	6	26		28		1139
Tetanus	1		1							7
Trachoma										-
Tuberculosis (all forms)	119		30	26	7	7	2		1	749
Typhoid fever	2	1				1				17
Typhus (all forms)										2
Vibrio parahaemolyticus infections										-
Yellow Fever										-
Yersinia enterocolitica infections										-

Data collected under the Notifiable Diseases Returns may bear little or no correlation to that collected under the CDI laboratory scheme. Whilst the latter is a sampling program, the Notifiable Diseases data is dependent upon voluntary reporting by medical practitioners etc.

Hepatitis Unspecified

- 1 case for Western Australia since the last report. Total is now 39 instead of 40.

Malaria

+ 3 cases for the Northern Territory and - 1 case for New South Wales since the last report. Total is now 148 instead of 146.

Q. Fever

- 1 case for South Australia since the last report. Total is now 264 instead of 265.