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Communicable Diseases Intelligence

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- Prenatal rubella - Victoria.

This is the final issue of CDI for 1982, and includes the subject index for the year. The next issue will be published on 14 January 1983. The editorial staff takes this opportunity to extend seasonal greetings to all readers, with best wishes for the New Year.

VIRUS REPORTING SCHEME - A total of 1100 reports were received this period. Patterns suggested by the reports include a decrease in *M. pneumoniae* infections; and the majority of respiratory infections in young children attributed parainfluenza virus type 3, adenovirus type 2 or rhinoviruses. The reports also imply a moderate increase in adenovirus type 19 infections (six patients with conjunctivitis; nine with genital disease).

Four of the eight reports of rubella infection from Fairfield Hospital, Melbourne, were of naval servicemen at HMAS Cerberus. Approximately 30-40 cases (23 confirmed) have been recorded to date, of which all, apart from one, have occurred in males aged between 17-25 years. The servicemen generally have shared accommodation; four occupants to a cabin. Presentations have been characterised by conjunctivitis, rhinorrhoea and florid maculopapular rashes. A similar outbreak of rubella among military personnel occurred in an army training unit in the UK in November 1982 (see CDR (1982) 82/48:1).

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GONOCOCCAL SURVEILLANCE - AUSTRALIA (JULY-SEPTEMBER 1982)

(Contributed by the Australian Gonococcal Surveillance Program (AGSP). Co-ordinator - J.W. Tapsall, Department of Microbiology, Prince of Wales Hospital, Sydney).

The AGSP collates the national prevailing penicillin sensitivities of N. gonorrhoeae isolates on a quarterly basis. This July-September 1982 report is the first for the second year of the program's full-scale operation. Table 1 details the prevalences of three strain categories ("sensitive", "decreased-sensitivity" and "penicillinase-producing N. gonorrhoeae" (PPNG)) in 1589 isolates.

TABLE 1 Penicillin sensitivity of N. gonorrhoeae isolates (July-September 1982)

Percentages for July-September 1981 are in parentheses.

Source	Percentage of isolates		
	Sensitive(1)	Decreased sensitivity(2)	PPNG
Adelaide	19.2 (40.0)	54.3 (43.9)	6.6 (0.8)
Melbourne	44.8 (45.3)	45.6 (45.0)	2.4 (1.1)
Brisbane	51.6 (52.0)	38.8 (42.0)	2.6 (1.7)
Sydney	28.9 (18.7)	62.5 (66.3)	4.0 (1.6)
Perth	27.7 (50.1)	52.9 (33.1)	7.0 (4.2)

1. MIC = 0.008 μg/ml ± one doubling dilution.
2. MIC = 0.12 μg/ml ± one doubling dilution.

The comparison of data of previous periods indicated increases in the relative proportion of less sensitive strains, initially manifested in Sydney and more recently in Perth, Adelaide and Brisbane (see CDI (1982) 82/20:2). In the present quarter, the trend was confirmed for Perth and Adelaide, but not for Brisbane. The percentage of non-penicillinase-producing gonococci relatively resistant to penicillin (MIC ≥ 1.0 μg/ml) remained low and represented approximately 2.0% of all isolates. Fifty-eight (3.6%) PPNG strains were reported. All centres recorded a higher percentage of isolation compared with the corresponding quarter in 1981. The largest increase was observed in Adelaide. Table 2 details the suspected sources of infection for the PPNG isolates.

TABLE 2 PPNG cases by isolation site and probable source of infection, July-September 1982

Sex	Site	Source of infection (1)					(2)	(3)	(4)	Total
		M	T	C	K	F				
Male	urethra	4	2	1			2	5	28	42
	rectum							1	2	3
	pharynx							3		3
Female	cervix/urethra				1		1	1	4	7
	rectum					1		1		2
	pharynx						1			1

1. - Imported infection probably acquired overseas (P = Philippines; T = Thailand; C = Canada; K = Kenya; F = Fiji).

2. - Introduced infection only one or two generations from an imported case.
3. - Indigenous infection more than two generations from an imported case, or no evidence of association with an introduction.
4. - Unknown

PHARYNGEAL INFECTION WITH PENICILLINASE-PRODUCING N. GONORRHOEAE (PPNG) - SOUTH AUSTRALIA

(Contributed by G. Handke, Venereal Diseases Unit, Royal Adelaide Hospital, Adelaide).

On 17 September 1982, a 42 year old female was screened as the consort of a 41 year old male who had a PPNG urethral infection probably acquired in Thailand. Urethral, cervical, vaginal and pharyngeal swabs from the contact were positive for PPNG, and the patient was given spectinomycin 2 gm IM. Although post-treatment cultures collected on 23 September from the urethra, cervix and vagina were negative, PPNG persisted in the pharynx. A second injection of spectinomycin was administered on 27 September. On recall three days later, her throat was still infected. Tetracycline 500 mg q.i.d. was prescribed, but treatment was terminated on the third day because the patient experienced nausea and vomiting. Since her throat infection persisted on 27 October, double strength trimethoprim/sulphamethoxazole (160 mg/800 mg) was given twice daily for three days. Pharyngeal cultures showed no growth on 4 November.

Editorial Comment

The high prevalence of gonococcal infections, combined with the increasing frequency of oral-genital sexual activity, necessitates that clinicians be aware that pharyngeal infections are no longer unusual. Most pharyngeal gonococcal infections are asymptomatic[1,2], but evidence is accumulating that oral-to-genital transfer may occur[3]. During the July-September 1982 quarter, four oro-pharyngeal infections due to PPNG were recorded in Australian patients[4]. Likewise of the 453 PPNG cases reported to the Communicable Disease Surveillance Centre, UK, during weeks 1-44, 1982, ten were cultured from the throat. Spectinomycin is often ineffective in PPNG pharyngeal infections,[5] and a daily single dose of nine tablets of trimethoprim/sulphamethoxazole (80 mg/400 mg) for five days should be used[6].

References

1. Br. J. Vener Dis. (1973) 49 : 491
2. NEJM (1973) 288 : 181
3. JAMA (1981) 246 : 2717
4. CDI (1982) 82/25 : 2
5. Br. J. Vener. Dis. (1982) 58 : 101
6. MMWR (1982) 31 Supplement 2 : 39S

ROSS RIVER VIRUS INFECTIONS ALONG THE SOUTH COAST OF NEW SOUTH WALES (1981-82)

(Contributed by M.J. Cloonan, T.G. Vale, I.W. Carter and K. McPhie, Department of Microbiology, Prince Henry Hospital, Sydney; B.J. Pascoe, B.W. Cleaves and K. Eurera, Pathology Department and Blood Bank, Bega District Hospital, Bega).

Human infections with Ross River virus (RRV) have been reported recently from the Kiama - Nowra region of the south coast of

New South Wales by Cloonan, Carter and Vale[1,2]. These infections were acquired locally, and supported the previous hypothesis that RRV activity extends along most, or all, of the coastal strip extending from Wollongong in the north to south-eastern Victoria[3]. However, no RRV activity has been demonstrated further south than Bawley Point which is approximately 130 km south of Wollongong and 80 km south of Nowra.

As part of the continuing study on RRV activity in the region, sera from 203 blood donors residing in the far south coast (Narooma to Eden) were tested for the presence of RRV antibodies. Fourteen sera (7%) were positive when tested by enzyme-linked immunosorbent assay (ELISA), with titres ranging from 1/10 to 1/1280 (geometric mean = 1/120). In addition, 21% of sera from 97 unselected hospital patients from the Bateman's Bay Hospital and Moruya Hospital had antibody against RRV, with titres ranging from 1/40 to 1/2560 (geometric mean = 1/154). Although the results are only suggestive of locally-acquired RRV infection, four blood donors exhibited seroconversion by ELISA in sera collected in 1981 and 1982 (Table 1).

TABLE 1 RRV seroconversions in four blood donors from the far south coast of NSW (1981-82)

Case	Sex	Age	Date	Antibody titre					Probable area of infection
				ELISA	Microneutralisation			IgM*	
				RRV	RRV	Getah	Sindbis		
1	F	22	26/11/80	<1/10	<1/4	<1/4	<1/4	-	Eden and south
			18/3/81	1/1280	1/8192	1/1024	<1/4	-	
2	F	27	7/1/81	<1/10	<1/4	<1/4	<1/4	-	Narooma-Kianga
			29/4/81	1/640	1/16384	1/1024	<1/4	+	
3	M	30	19/11/80	<1/10	<1/4	<1/4	<1/4	-	Tathra-Bega or Lakes Entrance
			4/6/81	1/160	1/1024	1/256	<1/4	-	
4	M	36	10/6/81	<1/10	<1/4	<1/4	<1/4	-	Pambula-Merimbula
			20/1/82	<1/10	1/1024	1/64	<1/4	+	
			5/5/82	1/320	1/1024	1/64	<1/4	+	

* - Tested by ELISA using IgM-capture assay.

Infections were acquired between late 1980 and early-to mid-1981 in two cases, between January and April 1981 in one case and between June 1981 and January 1982 in a fourth. All cases had subclinical infections. Diagnoses were confirmed by microneutralisation test.

Arbovirus seroconversions in persons living in a particular area for a certain period does not necessarily mean that infection was acquired locally, unless it can be shown that these individuals had remained within that study area for the period during seroconversion. Three patients had not been outside the study area, but case 3 had travelled on one occasion to Lakes Entrance on the south-east coast of Victoria.

Additional evidence for RRV activity in this region of New South Wales was provided by the isolation in March 1982 of RRV from a pool of 29 Coquillettidia linealis mosquitoes collected from the Nadgee State Forest, approximately 25 km south of Eden.

References

1. Aust. J. Exp. Biol. Med. Sci. (in press)
2. CDI (1981) 81/19 : 6
3. Aust. J. Exp. Biol. Med. Sci. (1980) 58 : 91

A PRISON OUTBREAK OF CAMPYLOBACTER ENTERITIS
(Contributed by V.W. Bamford, Combined Microbiology Service, Queen Elizabeth II Medical Centre, Perth).

Between 2-13 October 1982, 24 inmates at a minimum security prison farm, 65 km south of Perth, presented with acute abdominal pain and watery diarrhoea. One patient had a slightly elevated temperature. Eighty-eight prisoners were present on the farm at the time of the outbreak (the population ranging from 85-110 inmates). All the inmates were male aged between 19-50 years (average 26-27 years). Employment on the farm included preparation of meals in the kitchen under the supervision of an employed cook. A total of 28 persons (including the cook) were tested. Campylobacter jejuni was cultured from nine patients (32% isolation rate), and Giardia lamblia was detected in one faecal specimen. No other bacterial pathogens were isolated.

The prison farm maintained a herd of about 66 dairy cattle, of which 37 were producing milk at the time of the outbreak. This milk was not pasteurised, and was consumed by the farm inmates as well as being distributed to other prisons. In addition to the farm outbreak, five cases of enteritis were reported in a prison that received this milk on or about 5 October. Rectal swabs taken from the cattle identified one animal excreting C. jejuni.

Similarly, of the 25 rectal swabs taken at random from the chickens sent for slaughter from the farm's population of 4-5000 laying hens, one was positive for C. jejuni. In addition to the plant that processed the boiler fowls, the farm had a slaughter house for processing sheep and cattle.

OUTBREAK OF MUMPS IN A PRE-SCHOOL - NEW SOUTH WALES
(Contributed by P.D. Niall, Senior Medical Officer, Southern Metropolitan Region, Health Commission of New South Wales)

In June 1982, an outbreak of mumps was reported in a pre-school located in southern Sydney. The school consisted of two classes; one of 28 children aged four years and older, and the other of 20 children aged two and a half to four years. The activities of these classes were conducted separately.

The two index cases occurred among the older children, with 12 further cases recognised in the group over the next 15-50 days. Nine cases were reported in the younger group during days 32-69 of the outbreak i.e. with a delay of approximately one incubation period. The overall attack rate was 48%. No complications or unusual cases were reported. No infection was noted among the staff, and the only adult case recorded occurred in the mother of an affected child. Only four children (8%) attending the school had received mumps vaccination.

Editorial Comment

Mumps is generally a self-limited, but moderately debilitating disease that primarily occurs in young school age children, with only about 15% of reported cases occuring among

adolescents and adults. Although sequelae are rare, pancreatitis, aseptic meningitis, encephalitis, orchitis and oophoritis due to mumps cause considerable morbidity and hospitalisation. Nerve deafness (one in every 15000 reported cases) is one of the most serious of the rare complications involving the central nervous system. Mumps infection during the first trimester of pregnancy may increase the rate of spontaneous abortion[1], although there is no evidence that mumps during pregnancy causes congenital malformations.

Live mumps virus vaccine is prepared in chick embryo cell culture, and produces a sub-clinical, non-communicable infection with very few side effects. Following vaccination, more than 90% of persons susceptible to mumps develop measurable antibody, which, although of considerable lower titre than that following natural infection, is protective and long lasting.

Because there is no evidence that persons who have previously either received the vaccine or had mumps are at any risk of local or systemic reactions from receiving live mumps vaccine, testing for susceptibility before vaccination is unnecessary. Vaccination should be deferred in women during pregnancy because of the theoretical risk of foetal damage, in individuals who have received immune globulin within the previous three months, and in patients with immune deficiency diseases or have suppressed immune responses due to malignancy or therapy.

The "costs" associated with absence from work (patients or their parents) and from school are probably substantial, so that there is a positive benefit-cost ratio for mumps immunisation[2]. Vaccination is recommended for all children at any age after 12 months, and in Australia the vaccine may be administered either by itself or in combination with measles.

References

1. CDI (1981) 81/21 : 1
2. Am. J. Dis. Child (1982) 136 : 362

ECHOVIRUS TYPE 11 OUTBREAK IN A NEONATAL NURSERY - WESTERN AUSTRALIA

(Based on the July-September 1982 Quarterly Report, State Health Laboratory Services, Perth)

During September 1982, a nosocomial outbreak of echovirus type 11 infection occurred in one of the neonatal nurseries at King Edward Memorial Hospital, Perth (see also CDI 82/18). The index case was a mother who presented with severe abdominal pain, and was diagnosed as having abruptio placentae. The child was delivered by caesarean section, and developed meningitis a few days later. Eleven other babies became ill during the succeeding days, and echovirus type 11 was isolated from several throat swabs and faecal (or rectal swab) specimens. One twin became severely ill with haemorrhagic complications, developed disseminated intravascular coagulation and died.

Since the outbreak, two further introduction of the virus into the nursery have occurred; both by mothers infecting their babies. However, no secondary cases were identified. Two asymptomatic staff members were also found to be excreting the virus.

PRENATAL RUBELLA - VICTORIA

(Contributed by K. Hayes, Fairfield Hospital, Melbourne)

Live births with prenatal rubella infection - During the eight months from November 1981 - July 1982, seven neonates were proven to have prenatal rubella infection by laboratory tests. Five of these infants were born between April-July 1982 as a result of the epidemic in Victoria in the previous spring and summer. Maternal rubella in these cases occurred between 6-25 weeks of pregnancy. Four infants had evidence of generalised infection at birth. Two infants have cataracts and deafness; one had evidence of encephalopathy (rubella meningitis confirmed by virus isolation from the CSF); one was premature and small for gestation age; two infants appear normal to date and data for one is lacking.

Therapeutic abortions - During the same period, rubella virus was isolated from foetal tissues in four of eight cases of maternal rubella tested, and from placental, but not foetal, tissues in two cases. The total number of cases of therapeutic abortion due to maternal rubella infection is unknown.

Prenatal diagnosis of rubella in utero - Rubella virus was isolated from amniotic fluid of two of five cases tested in the second trimester of pregnancy and who subsequently had live births; and from two of three cases of therapeutic abortion. There was complete correlation between the results of testing amniotic fluid and the results of tests for infection of the infant or the aborted foetus.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 25/11/82 - 8/12/82 BULLETIN NUMBER 82/25

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	6		1			3	4	3	17
0101 ADENOVIRUS TYPE 1				1	3	2			6
0102 ADENOVIRUS TYPE 2					22	4			27
0105 ADENOVIRUS TYPE 5			1		3	1			5
0108 ADENOVIRUS TYPE 8								2	2
0119 ADENOVIRUS TYPE 19			1	4				11	16
0199 ADENOVIRUS TYPING PENDING					8	1			9
0201 INFLUENZA A VIRUS	1		3			1	3	1	9
0203 INFLUENZA B VIRUS	1		1				1	4	7
0302 PARAINFLUENZA VIRUS TYPE 2								1	1
0303 PARAINFLUENZA VIRUS TYPE 3	2		1	6	12	15	7	8	51
0399 PARAINFLUENZA VIRUS TYPING PENDING.						2			2
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)	2			1	1	3	3	2	12
0500 RHINOVIRUS (ALL TYPES)	1			6	20		5		32
0600 MYCOPLASMA PNEUMONIAE		2	5	6		5	15	18	52
0700 ORNITHOSIS-PSITTACOSIS				2		1		2	5
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED							2		2
0809 COXSACKIEVIRUS A9	1			1					2
0902 COXSACKIEVIRUS B2							1		1
0903 COXSACKIEVIRUS B3				1					1
0904 COXSACKIEVIRUS B4						1			1
1005 ECHOVIRUS TYPE 5	2								2
1006 ECHOVIRUS TYPE 6			1						1
1011 ECHOVIRUS TYPE 11	1			2		1	4	2	10
1018 ECHOVIRUS TYPE 18				1					1
1030 ECHOVIRUS TYPE 30	3								3
1101 POLIOVIRUS TYPE 1								1	1
1102 POLIOVIRUS TYPE 2							1		1
1103 POLIOVIRUS TYPE 3							1		1
1104 POLIOVIRUS-VACCINAL STRAIN			3						3
1200 MUMPS VIRUS	3	2	3				3	5	16
1300 HERPES VIRUS GROUP-NOT TYPED	23					15		2	40
1301 HERPES SIMPLEX VIRUS NOT-TYPED		1		4			1	64	70
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	12		2					4	18
1303 VARICELLA-ZOSTER VIRUS	1	1	2				1	2	7
1306 HERPES SIMPLEX TYPE 1	15			27		42	14		98
1307 HERPES SIMPLEX TYPE 2	91			38		39	49		217
1399 HERPES VIRUS TYPING PENDING			10			5			15
1401 COXIELLA BURNETI	1			2			4		7
1502 PICORNA VIRUS-NOT TYPED			2						2
1521 MEASLES VIRUS	1	1		8	4		1	1	16
1522 RUBELLA VIRUS	1			8	1		3	4	17
1532 HEPATITIS B ANTIGEN	16		12			12	21	10	71
1535 HEPATITIS A ANTIBODY	3					4	6	20	33
1541 CHLAMYDIA A - C TRACHOMATIS	22		3					73	98
1556 CMV - CYTOMEGALOVIRUS	3	1		15	7		7	7	40
1563 CORONAVIRUS				1					1
1564 ROTAVIRUS	5	9	1	4		5		2	26
1599 ENTEROVIRUS TYPING PENDING		2	5		7		3		17
ROSS RIVER VIRUS							1	2	3
SMALL VIRUS (LIKE) PARTICLE	1					1			2
PARAMYXOVIRUS						1			1
KUNJIN VIRUS							1		1
ARBO. GROUP B. ...				1					1
Total	219	19	57	140	88	164	162	251	1,100

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 25/11/82 to 8/12/82 .... 82/25

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	Hepa -tic	CVS	Urin -ary	Skin/ mucs memb
0101 ADENOVIRUS TYPE 1............		4					2				
0102 ADENOVIRUS TYPE 2............	1	19	1				6				
0105 ADENOVIRUS TYPE 5............		2					1				
0201 INFLUENZA A VIRUS............	1	6									
0203 INFLUENZA B VIRUS............	1	3									
0303 PARAINFLUENZA VIRUS TYPE 3....	2	41									
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)............................		11									
0500 RHINOVIRUS (ALL TYPES)........		31					1				1
0600 MYCOPLASMA PNEUMONIAE.........	5	39									2
0700 ORNITHOSIS-PSITTACOSIS........	1	3									
0809 COXSACKIEVIRUS A9............				2							
0902 COXSACKIEVIRUS B2............							1				
0903 COXSACKIEVIRUS B3............				1							
1005 ECHOVIRUS TYPE 5.............	1					1					
1006 ECHOVIRUS TYPE 6.............							1				
1011 ECHOVIRUS TYPE 11............				8			1				
1018 ECHOVIRUS TYPE 18............						1					
1030 ECHOVIRUS TYPE 30............	2					1					
1101 POLIOVIRUS TYPE 1............	1										
1102 POLIOVIRUS TYPE 2............		1									
1103 POLIOVIRUS TYPE 3............									1		
1104 POLIOVIRUS-VACCINAL STRAIN....		1					1				1
1200 MUMPS VIRUS..................	7		1	2		1		1			1
1300 HERPES VIRUS GROUP-NOT TYPED..											1
1301 HERPES SIMPLEX VIRUS NOT-TYPED	4									1	46
1302 EPSTEIN-BARR VIRUS (EB VIRUS).	1	1						2	1		
1303 VARICELLA-ZOSTER VIRUS........	1										6
1306 HERPES SIMPLEX TYPE 1.........		5			1						51
1307 HERPES SIMPLEX TYPE 2.........	7	1									13
1401 COXIELLA BURNETI.............		2						1			1
1521 MEASLES VIRUS................		2									13
1522 RUBELLA VIRUS................								1			16
1532 HEPATITIS B ANTIGEN...........	18	2						42			
1535 HEPATITIS A ANTIBODY..........	9	1						19			
1556 CMV - CYTOMEGALOVIRUS.........	4	12	1		1	1	1	2		5	
1563 CORONAVIRUS..................		1									
1564 ROTAVIRUS....................							26				
9992 ROSS RIVER VIRUS..............											2
9994 SMALL VIRUS (LIKE) PARTICLE...							2				
9996 PARAMYXOVIRUS................		1									
9997 KUNJIN VIRUS.................	1										
9998 ARBO. GROUP B.			1								
Total............................	67	189	4	13	2	5	43	68	2	6	154

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE 82/25

PERIOD : 25/11/82 to 8/12/82 ...
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	Gen-ital	Endo/sal gland	RES	Muscle/joint	Con-genit-al	PUO	Fever/mal-aise	Other	SIDS
0102 ADENOVIRUS TYPE 2............										1
0105 ADENOVIRUS TYPE 5............	1								1	
0108 ADENOVIRUS TYPE 8............		2								
0119 ADENOVIRUS TYPE 19...........	7	9								
0201 INFLUENZA A VIRUS............							1	2		
0203 INFLUENZA B VIRUS............					1		1	2		
0302 PARAINFLUENZA VIRUS TYPE 2....								1		
0303 PARAINFLUENZA VIRUS TYPE 3....				1	1		2	6	1	
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)........................					1			2		
0500 RHINOVIRUS (ALL TYPES).......					1					
0600 MYCOPLASMA PNEUMONIAE........	1		1	2	1		2	2		
0700 ORNITHOSIS-PSITTACOSIS........							1			
0904 COXSACKIEVIRUS B4............					1					
1011 ECHOVIRUS TYPE 11............								2		
1200 MUMPS VIRUS..................			1					2	1	
1301 HERPES SIMPLEX VIRUS NOT-TYPED		23						1		
1302 EPSTEIN-BARR VIRUS (EB VIRUS).			7	1				5	2	
1306 HERPES SIMPLEX TYPE 1.........	3	39						1	1	
1307 HERPES SIMPLEX TYPE 2.........		196						1		
1401 COXIELLA BURNETI.............							1	5		
1521 MEASLES VIRUS................	1							1		
1522 RUBELLA VIRUS................					1			1		
1532 HEPATITIS B ANTIGEN..........									10	
1535 HEPATITIS A ANTIBODY..........									4	
1541 CHLAMYDIA A - C.TRACHOMATIS...		98								
1556 CMV - CYTOMEGALOVIRUS.........		7				5	1	1	1	
1564 ROTAVIRUS....................								1		
9992 ROSS RIVER VIRUS.............					2			2		
Total............................	13	374	9	4	9	5	9	38	21	1

Entries indicate Issues: Page number.
Underlined entries refer to longer articles
(c) refers to corrigenda of previous article(s)

Acute haemorrhagic conjunctivitis - 3/4; 20/1
Adenoviruses - 7/4
Adenovirus 2 - 4/1 ; 25/1
" 3 - 4/1
" 8 - 3/1; 17/1
" 11 - 3/1
" 19 (cross 37) - 4/1 ; 25/1
" 21 - 7/1
" 35 - 18/1
AIDS - 16/3; 24/2
Amoebiasis - 19/6
Ancylostoma caninum - 19/3
Arboviruses - 7/6
Arbovirus surveillance - 2/1; 3/1; 4/6(c); 5/1; 6/1; 22/5; 24/5

Bacterial nomenclature - 5/6

Campylobacter - 23/3; 25/5
CDI reports-1981 - 7/2
Cercarial dermatitis - 19/4
Chlamydia psittaci - 7/2
Chlamydia trachomatis - 4/1; 7/2; 11/3; 12/1
Clonorchis sinensis - 8/1
Colonic irrigation - 14/15/2
Corynebacterium diphtheriae - 2/1; 2/6; 19/5
Coxiella burnetii - 7/6; 14/15/6
Coxsackieviruses - 7/5
Coxsackievirus B3 - 7/1
" B5 - 8/6
Cryptococcus albidus - 22/1
Cytomegalovirus - 4/1; 7/6; 11/1

Dengue infections (imported) 1/1; 5/1; 7/1; 14/15/1; 22/1
Dengue infections (indigenous) - 1/1; 2/1; 3/1; 4/1; 4/2; 5/1; 6/1; 7/1; 8/1; 10/1; 11/1; 12/1; 14/15/1; 19/1; 20/1; 22/1
Dengue surveillance - 4/2; 22/2; 23/5

Echoviruses - 7/4
Echovirus 11 - 14/15/6; 17/1; 18/2 19/6; 20/1; 25/6
" 17 - 2/1; 7/1; 8/2; 14/15/6
" 21 - 7/1
" 31 - 14/15/6

Edwardsiella tarda - 16/1
Enterovirus type 70 - 3/4; 6/1
Epstein-Barr virus - 7/6

Food-poisoning - 6/7; 20/5

Giardiasis - 10/4
Gonorrhoea surveillance - 5/2; 11/2; 20/2; 25/2
" " (PPNG) - 3/2; 20/3
" " (spectinomycin resistance) - 8/5; 20/4; 23/1; 25/3

Hepatitis A - 7/2; 10/1
Hepatitis B - 7/2
Herpes simplex - 6/1; 7/2; 8/1; 12/1; 13/1, 14/15/6
Hirschsprung's Disease - 14/15/4
Influenza A - 7/4; 13/1; 16/1; 17/1; 20/1
Influenza B - 7/4; 13/1; 14/15/1; 16/1; 17/1; 20/1

Japanese encephalitis - 19/1

Kaposi's sarcoma (see AIDS) 16/3; 24/2
Kunjin virus - 2/1; 4/6(c); 5/1; 6/1; 7/1; 12/1

Legionnaires' Disease - 9/1; 19/2
Leprosy - 17/2
Lymphogranuloma venereum - 6/1; 7/2; 13/1

Malaria - 12/2; 12/8; 13/1(c)
Measles - 1/6; 2/3; 7/5
Mosquito surveillance - 4/2; 22/2
Mumps - 3/1; 7/5; 25/5
Mycobacterium surveillance - 5/3
Mycobacterium marinum - 2/1
Mycoplasma pneumoniae - 6/1; 7/4; 11/1; 14/15/1; 20/1; 22/1; 24/1

Necator americanus - 19/3
Norfolk Island - 17/1; 8/2

Opportunistic infections (see AIDS) - 16/3; 24/2

Paragonimus westermani - 14/15/3
Parainfluenzaviruses - 7/4
Parainfluenzavirus 1 - 7/1
" 3 - 1/1; 22/1; 25/1
Parasitic rashes - 19/3
Parvovirus-like particles - 14/15/5
Poliovirus - 7/1; 7/5; 9/3; 14/15/4; 16/1
Poxviruses - 7/6
Pneumocystis carinii (see AIDS) - 16/3; 24/2
Pregnancy; infection in - 1/1; 12/2; 16/1; 18/2; 21/1; 23/5
Pseudomonas aeruginosa - 16/2

Queensland tick typhus - 18/1

Rabies - 4/5
Respiratory infections - 11/6
Respiratory syncytial virus - 7/4; 13/1; 14/15/1; 20/1
Reye's syndrome - 5/5; 7/1; 7/6(c); 14/15/6
Rhinoviruses - 7/4; 25/1
Ross River virus - 3/1; 4/1; 5/1; 7/1; 8/1; 10/1; 12/1; 14/15/1; 25/3
Rotavirus - 7/2; 17/1; 20/1
Rubella - 6/1; 7/5; 9/1; 11/1 12/1; 12/1 ; 25/1; 25/7

Salicylates - 5/5
Salmon food-poisoning - 20/5
Salmonella excreters - 21/3
Salmonella surveillance (human) - 1/2; 9/2; 11/3; 13/2; 14/15/2; 23/2
S. bovis-morbificans - 1/5; 1/6
S. newport - 1/3
S. typhi - 8/1
S. typhimurium 101 - 2/2
Shigella sonnei - 10/3
Small virus-like particles 2/1; 17/1
Staphylococcus aureus (See TSS) - 2/3; 2/5; 6/6
" (MRSA) - 6/2
STD surveillance - 10/2; 11/2; 13/4
Streptococcus pneumoniae - 10/5; 11/4; 11/6(c); 18/1
Streptococcus pyogenes - 5/2
Strongyloides stercoralis - 19/4
Syphilis - 10/2; 13/4; 20/4

Taenia solium - 8/1
Tetanus - 19/6
Thursday Island - 1/1; 2/1; 3/1; 4/2; 5/1; 6/1; 7/1; 10/1 14/15/1
Toxic pneumonia - Spain - 6/8
Toxic Shock Syndrome (TSS) - 2/3; 6/6; 18/3

Vaccinia - 11/1; 21/2
Varicella - 1/1; 5/1; 7/6; 12/1; 18/1