

LONG INCUBATION FOR RABIES

Recent case reports from the US and Sydney show that rabies may occasionally have a very long incubation period (2-19 years after exposure). Therefore, it may occur in immigrants from endemic areas such as South East Asia years after immigration and should be considered in the differential diagnosis of encephalitis in these patients.

Rabies is usually fatal (three known survivors had vaccine). There is no effective therapy and diagnosis is usually established postmortem. Antemortem diagnosis is important to prevent unnecessary investigations and treatment and also possible nosocomial transmission.

It is not generally known that the most rapid way to diagnose rabies antemortem is to examine a skin biopsy from the nape of the neck for rabies antigens by immunofluorescence and process saliva for virus isolation in neuroblastoma cells (or mice).

In the immunofluorescence test, a full-thickness, 0.5cm diameter skin biopsy is taken from just above the hairline, avoiding excessive infiltration of the specimen with local anaesthetic. It should be frozen at -70°C while awaiting transport for testing. Sensitivities and specifications of the saliva and skin tests are as follows.

	Sensitivity	Specificity
Virus isolation from saliva	35-55% (decreasing with duration of illness)	100%
Rabies antigen in skin biopsy	50-94% (increase with duration)	100%

In patients who have not been immunised, serum antibody detection may also be useful in the second week after onset of symptoms. Brain biopsy from the cortex is not usually helpful.

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TABLE 1

INFECTIOUS DISEASE NOTIFICATIONS, NSW To end of April, 1991

CONDITION	Number of Cases Notified			
	Period		Cumulative	
	April 1990	April 1991	April 1990	April 1991
Acute viral hepatitis	39	18	119	265
AIDS	24	-	124	±52
Arboviral infection (NOS)	28	17	64	100
Brucellosis	-	-	2	-
Cholera	1	-	1	-
Diphtheria	-	-	-	-
Foodborne illness	N/A	38	N/A	93
Gastroenteritis	N/A	-	N/A	12
Gonorrhoea	30	5	115	55
Haemophilus influenza inf.	N/A	4	N/A	8
HIV	N/A	-	±448	±216
Hydatid disease	-	-	-	-
Legionnaires' disease	-	-	10	8
Leprosy	1	-	1	-
Leptospirosis	1	-	13	12
Listeriosis	-	-	-	-
Malaria	18	-	53	6
Measles	3	3	10	47
Meningococcal infection	4	1	11	14
Mumps	N/A	-	N/A	1
Mycobacterial infection (NOS)	22	1	124	21
Pertussis	15	1	83	11
Plague	-	-	-	-
Poliomyelitis	-	-	-	-
Q fever	17	2	44	22
Rubella	N/A	-	-	2
Salmonella infection	159	8	494	399
Syphilis	24	8	70	130
Tetanus	-	-	-	-
Typhoid & paratyphoid	1	1	9	30
Typhus	-	-	-	-
Viral haemorrhagic fever	-	-	-	-
Yellow fever	-	-	-	-

± Data January-March only

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INFECTIOUS DISEASES

Notifications received by Epidemiology and Health Services Evaluation Branch for 1991 to the end of April include:

- Fifty-two cases of AIDS. All but three were in residents of metropolitan Sydney at the time of diagnosis. A high rate of notifications has been received from the Eastern Sydney Area at a rate of 28.5/100,000/year. The State average is 3.6/100,000/yr.
- Staff from the State HIV Reference Laboratories have reported new cases of HIV infection in all but two Health Regions. The State average is 15.2/100,000/yr. This compares with a rate of 31.4/100,000/yr based on similar data for 1990. Notifications for 100 of the total HIV infection (45%) cannot be allocated to a specific AHS/Region. Epidemiology Branch is addressing the issue of data quality in collaboration with the Reference Laboratories.
- Two Regions report high rates of syphilis — North Coast (27.3/100,000/yr) and Orana & Far West (4.1/100,000/yr). The rate for the State is 2.3/100,000/yr. The reported rate for the United States is 16.0/100,000/yr.
- Rubella has been notified by the staff of two Public Health Units — Hunter and Western Sector. Epidemiology Branch alerts the community that in spite of the successes of the schoolgirl immunisation program, and the initiation of universal immunisation against rubella in 1989, the virus still circulates in the community. The Centers for Disease Control report a resurgence of both rubella and congenital rubella syndrome in the United States (MMWR 1991;40:93-99).
- Q Fever continues to be notified by the staff of four Regional PHUs — New England, North Coast, Central West and Orana & Far West. During May the Epidemiology Branch will initiate steps that it hopes will lead to a Q Fever immunisation program in NSW.
- Malaria notifications have fallen significantly for this reporting period, compared with the same period in 1990. Concerted efforts are being made by the NSW Health Department to raise awareness about health risks associated with overseas travel.

Tabulations for the month of April refer to notifications received from the following Public Health Units on the Infectious Diseases Database System (IDDS), up to the following dates:

PUBLIC HEALTH UNIT	DATE
Eastern Sydney	April 24
South Western Sydney	April 29
Western Sector*	April 24
North Coast Region	April 24
New England Region	April 23
South West Region	April 24

*Western Sydney and Wentworth AHS

TABLE 2

TOTAL CONFIRMED HIV-POSITIVE CASES BY RISK GROUP AND SEX, CUMULATIVE TO MARCH 31, 1991*

Risk group	Male	Female	Transexual	Unknown	Total
Homosexual/ bisexual	5413	25	1	180	5619
Heterosexual	132	74	1	2	209
Injecting drug user (IDU)	174	48	0	16	238
Homosexual/ bisexual + IDU	106	6	0	4	116
Heterosexual + IDU	21	19	0	2	42
Homosexual + transfusion	2	0	0	0	2
Transfusion	57	41	0	2	100
Haemophilia	53	0	0	0	53
Vertical transmission	11	6	0	4	21
Specified (NEC)	65	11	0	18	94
Unknown	4127	231	1	1980	6339
TOTAL	10161	461	3	2208	12833

* Westmead & Prince of Wales Hospital data to 31/3/91; previous positives excluded Royal Prince Alfred Hospital data 1/1/91 to 31/3/91; previous positives excluded St Vincent's Hospital data to 31/1/91; previous positives not excluded

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TABLE 3

**INFECTIOUS DISEASE NOTIFICATIONS,
BY HEALTH AREA & REGION,
FOR MONTH OF APRIL, 1991**

DISEASE	CSA	SSA	ESA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	OTH	TOTAL
Acute viral hepatitis	-	-	6	3	3	1	-	-	-	-	1	3	-	-	1	-	-	18
Arboviral inf.	-	-	-	-	-	-	-	-	-	-	2	14	-	-	1	-	-	17
Foodborne illness	-	-	29	1	-	-	-	-	-	-	-	1	-	-	7	-	-	38
Gonorrhoea	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	5
H Influenzae infection	-	-	-	-	1	2	-	-	-	-	-	-	-	-	1	-	-	4
Measles	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-	-	-	3
Meningococcal inf.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Mycobacterial inf.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Pertussis	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Q fever	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	2
Salmonella infection	-	-	-	-	2	4	-	-	-	-	2	-	-	-	-	-	-	8
Syphilis	-	-	-	-	-	-	-	-	-	-	7	1	-	-	-	-	-	8
Typhoid & paratyphoid	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

TABLE 4

**INFECTIOUS DISEASE NOTIFICATIONS,
BY HEALTH AREA & REGION,
FOR PERIOD JANUARY 1 TO APRIL 30, 1991**

DISEASE	CSA	SSA	ESA	SWS	WSA	WEN	NSA	CCA	ILL	HUN	NCR	NER	OFR	CWR	SWR	SER	OTH	U/K	TOTAL
Acute viral hepatitis	52	6	30	9	52	8	22	1	2	10	29	23	11	-	5	4	1	-	265
AIDS*	7	2	23	3	4	2	8	-	-	-	2	-	-	-	-	-	-	1	52
Arboviral infection	-	-	1	-	-	-	-	-	-	-	13	49	20	4	12	1	-	-	100
Foodborne illness	-	-	52	-	8	3	-	-	-	1	-	8	-	-	20	1	-	-	93
Gastroenteritis (inst)	-	-	-	1	5	5	-	-	-	-	-	1	-	-	-	-	-	-	12
Gonorrhoea	-	1	31	10	-	-	2	-	1	-	6	-	3	-	1	-	-	-	55
Haemophilus influenzae inf.	-	-	-	-	1	3	-	-	-	-	-	-	-	-	4	-	-	-	8
HIV*	17	3	46	7	14	1	7	1	1	10	6	-	1	1	-	1	1	99	216
Legionnaires' disease	-	-	-	-	3	2	1	-	-	1	-	-	-	-	-	-	1	-	8
Leptospirosis	-	-	-	-	-	-	1	-	-	5	1	-	1	-	1	-	3	-	12
Malaria	-	-	-	-	1	-	3	-	-	1	1	-	-	-	-	-	-	-	6
Measles	2	-	-	-	2	1	5	-	1	18	14	2	-	-	-	2	-	-	47
Meningococcal inf.	-	1	-	-	-	-	1	-	-	3	7	-	-	-	-	2	-	-	14
Mumps	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Mycobacterial inf.	-	1	-	1	5	1	5	-	2	-	3	-	-	3	-	-	-	-	21
Pertussis	-	-	1	1	2	-	1	-	-	1	3	-	2	-	-	-	-	-	11
Q fever	-	-	-	-	-	-	-	-	-	-	7	7	5	3	-	-	-	-	22
Rubella	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	2
Salmonella inf.	26	35	12	52	48	32	40	8	16	15	44	24	11	12	7	8	9	-	399
Syphilis	6	3	26	14	10	1	5	1	1	2	31	6	19	4	1	-	-	-	130
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Typhoid and paratyphoid	5	4	2	-	-	5	4	1	1	2	-	2	1	-	-	-	3	-	30

* January-March only

Abbreviations used in this Bulletin:

CSA Central Sydney Health Area, SSA Southern Sydney Health Area, ESA Eastern Sydney Health Area, SWS South Western Sydney Health Area, WSA Western Sydney Health Area, WEN Wentworth Health Area, NSA Northern Sydney Health Area, CCA Central Coast Health Area, ILL Illawarra Health Area, HUN Hunter Health Area, NCR North Coast Health Region, NER New England Health Region, OFR Orana & Far West Health Region, CWR Central West Health Region, SWR South West Health Region, SER South East Health Region, OTH Interstate/Overseas, U/K Unknown, NOS Not Otherwise Stated.

Footnote: The data in this Bulletin are provisional and subject to change because of late reports or changes in case classification. Data are tabulated where possible by area of residence and by the disease onset date and not simply the date of notification or receipt of such notification.