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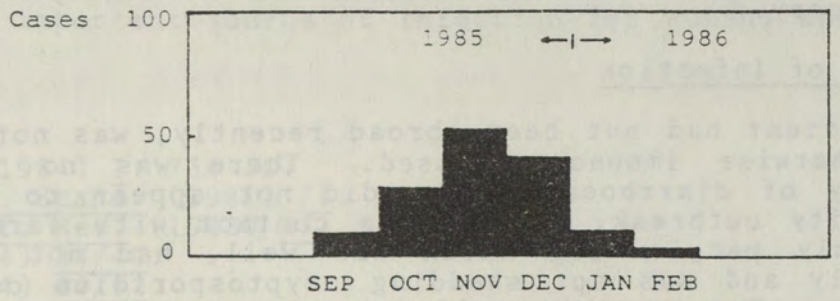
Virus Reporting Scheme - A total of 1,167 reports were processed for this period.

CDI 86/1 reported an apparent epidemic of coxsackievirus B4 over the last quarter of 1985 (Figure 1).

FIGURE 1



In the current reporting period there has been only 1 report of this virus, compared with 2 and 7 for the past consecutive periods. In this report the virus was isolated from a 9 month old male with gastrointestinal disease and respiratory tract infection.

Similar coxsackie B4 virus activity has been reported in New Zealand:

- Christchurch: the virus has been prevalent since early November and isolates have been recovered from young children with meningitis (4), respiratory distress (1), pneumonia (1) and a chronic asthmatic (1).
- Dunedin: the virus has been prevalent since December. The majority of virus isolates were recovered from young children with gastroenteritis. However, one isolate was recovered from a 1 year old with encephalitis.

Cytomegalovirus was isolated from:

- the post-mortem specimens of tissues derived from the lymph nodes, lungs, liver, spleen, adrenal glands, kidneys, colon, testes and epididymis of 2 middle age male AIDS patients who suffered from severe diarrhoea before death.
- the leucocytes and broncho-alveolar washing of a 48 year old immunosuppressed male renal transplant patient with pneumonia.

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- the saliva and leucocytes of 3 HTLV-III antibody positive individuals, including a 32 year old male with watery diarrhoea and a 41 year old male suffering from Herpes Simplex Virus meningitis.
- the urine of a 3 year old female with intermittent cervical lymphadenopathy who underwent open heart surgery with blood transfusion in August 1984.

Forty eight cases of Ross River virus were reported: 6 from Western Australia, 4 from New South Wales and 38 from Victoria.

CRYPTOSPORIDIUM SURVEILLANCE - UNITED KINGDOM
(Based on CDR (1985) 85/17 : 3)

A 32 year old man presented to his general practitioner with vomiting, abdominal pain and bloodstained watery diarrhoea. Laboratory investigations failed to demonstrate infection with campylobacter, salmonella, shigella or yersinia species, but large numbers of cryptosporidium oocysts were seen on examining an auramine-stained faecal smear by indirect light fluorescence microscopy.

Source of Infection

The patient had not been abroad recently, was not on steroids, or otherwise immunosuppressed. There was no recent family history of diarrhoea and he did not appear to be part of a community outbreak. He had no contact with farm animals and the only pet, a dog which was well, had not had diarrhoea recently and was not shedding cryptosporidium oocysts in its faeces. The patient offered the information that "while preparing tripe for the dog's dinner, some of it got into my mouth". The tripe was bought frozen and kept in a frozen state until being thawed out for use. It was not cooked before being eaten.

A sample of the suspect tripe was examined in the laboratory by washing vigorously with sterile quarter strength Ringer solution and centrifuging the washings at 750-1500G for ten minutes. The spun deposit was distributed on three slides and these were stained by auramine[1], Jenner-Giemsa and modified Ziehl-Neelsen[2] stains. Scanty cryptosporidium oocysts were seen singly, and one group of eight oocysts was attached to the edge of a single piece of debris (possibly stomach mucosa). Haematoxylin and eosin- and auramine-stained sections of the tripe showed numerous bacteria but failed to reveal further evidence of cryptosporidium.

Comment

There is evidence that cryptosporidiosis in humans can follow direct contact with farm animals[3], domestic pets[4], and infected individuals, particularly children[4]. Water and unpasteurised milk[5] have been suggested as vehicles of infection. In a mixed outbreak of cryptosporidium and campylobacter infections, it was found that cases were more likely than controls to have eaten sausages frequently[5]. This is the first recorded instance of cryptosporidiosis in which the organism has been demonstrated in a sample of the food which was ingested.

Cryptosporidium colonisation usually occurs in the small and large intestines in mammals but can involve tonsils, bronchi, stomach, pancreatic and bile ducts and gall bladder[6]. The tripe in this case was probably prepared from the stomach of a cow colonised with cryptosporidium although contamination of the tripe during processing is possible. Tripe for human consumption goes through a series of scrubbing, boiling and bleaching processes but cross contamination resulting in salmonella infections can occur (personal communication, J.A. Pinegar 1985). Boiling will kill cryptosporidium oocysts and eating raw untreated tripe cannot be recommended. The presence of infection following the consumption of frozen material indicates that the organism can remain viable when frozen. This differs from experimental work indicating that cryptosporidium is killed by freezing[7], and suggests that it may be possible to store reference strains in this way.

The absence of oocysts in the dog's faeces may have been due to immunity induced by repeated exposure to infected material. Cryptosporidium in cats and dogs may be passed directly from individual to individual but this case indicates that the organism may originate in their food. Offal products may represent an important source of infection for humans and their pets.

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HAEMOPHILUS INFLUENZAE, TYPE B

Haemophilus influenzae, type B (Hib) causes a variety of serious childhood diseases including meningitis, epiglottitis, osteomyelitis, septic arthritis, cellulitis and pneumonia. Two cases of Haemophilus influenzae, type B, infection acquired by children in day care centres in Canada have been reported[1]. In each case, laboratory confirmation lead to the implementation of treatment programs involving children and parents in the day care centres. Because of the high risk of contracting an infection in young children, all direct contacts were treated prophylactically with rifampicin.

In the first case (a patient with periorbital cellulitis), the directors of the day care centre, following a briefing by a paediatrician, contacted the parents of all children to explain the situation. Parents were advised that health personnel would be at the day care centre to answer questions and distribute medication. Subsequently, 25 of 26 children attended with their parents. The following explanations were given (i) the reason for the medication, (ii) the possible effects of both the infection and the medication, and (iii) the risk of recurrence of the infection.

In the second case (a patient with fatal epiglottitis) parents of contacts were informed, either by Community Health Nurses at the day care centre or by telephone. In addition, a letter was distributed to parents. Local doctors were also notified. Community health nurses attended the day care centre to distribute rifampicin with an information and instruction sheet. All but 1 of the 64 identified contacts at the day care centre received rifampicin. (One day-care centre staff member was not given rifampicin due to suspected pregnancy.) No secondary cases have been reported.

In November 1985, the National Health and Medical Research Council (NHMRC)[3] recommended that in any household in which a case of H. influenzae, type B infection has occurred and in which another child less than four years of age resides, all members of the household, including adults, should receive rifampicin in a dose of 20 mg/kg once daily (maximum dose 600 mg/day) for four days; the dose for neonates (less than one month) is 10 mg/kg once daily for four days. It should be noted that chemoprophylaxis is not a substitute for parent education. Council advised that exposed children need careful observation and should be examined by a physician at the first signs of any unexplained febrile illness.

A polysaccharide vaccine against invasive disease caused by H. influenzae, type B has been licensed in the United States[3,4]. Immunisation of all children at 24 months of age is recommended in the USA. In addition, immunisation of children at 18-23 months of age, particularly those in known high risk groups and in day care centres, may be considered. Hib immunisation of children at 18-23 months of age enrolling in day care centres in California has been reviewed[5]. While available data are not definitive, health authorities have concluded that there does not currently exist sufficient basis for altering the recommendation. This conclusion was based on the following evidence:

(i) immunogenicity: 50% of 18-23 months old children given 5 micrograms of vaccine developed presumably protective antibody levels, while 75% of those given 21.5 micrograms of vaccine developed these levels. The current vaccine contains 25 micrograms of Hib polysaccharide per dose, so it is inferred that 75% of 18-23 month old children develop a presumably adequate response, though this is age dependent;

(ii) protective efficacy: although failures of Hib vaccine given at 18-19 months have been reported, similar failures of the vaccine have occurred when given at ages 24 months or older;

(iii) Hib meningitis risk: US data indicate that the number of Hib meningitis cases occurring between ages 18 and 23 months is between 50% and 100% of the number occurring at ages 24 months or older. Thus, electing not to give an 18 month old child Hib vaccine is forfeiting the possibility of eliminating 1/3 to 1/2 of his or her remaining Hib meningitis risk;

(iv) secondary Hib cases in day care centres: evidence indicates that the principal risk of secondary Hib disease in day care centre contacts of a case are limited to contacts under 24 months of age;

(v) immunity duration: elevated antibody levels persist at least 3 1/2 years in children immunised at age 36 months and older, compared to 1 1/2 to 3 1/2 years in those immunised at 18-35 months. Therefore, while the younger a child is when immunised the shorter the duration of protection, the recommended age of 24 months for Hib immunisation is arbitrary.

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5. California Morbidity (1985) 48:1

HUMAN SALMONELLOSIS SURVEILLANCE

(Contributed by J. Powling, J. Taplin and L. Scott, Microbiological Diagnostic Unit (MDU), University of Melbourne)

A total of 1,803 salmonella (84 serotypes), 348 shigella and 686 campylobacter reports from human cases were collated in Australia during January - March 1985.

Salmonella typhi:

- S.typhi E 1 was isolated from a 34 year old male who had consumed mussels, collected near the sewerage outlet. Subsequent microbiological screening of mussels collected from this site and the sewerage effluent, although not identifying S. typhi, revealed a variety of salmonella species.
- S.typhi B 1 was recovered from a 85 year old female who returned from visiting the Philippines where a relative was suffering from typhoid.
- S.typhi T was iolsated from an adult male who acquired the infection at a Tongan pig roast where one of the guests had subsequently been identified as a typhoid carrier.
- S. typhi O and another untypable strain were recovered from a 3 year old girl, whose mother was a known carrier of these two strains.
- S.typhi 8 was isolated from an 11 year old male who acquired the infection in Chile.
- Untypable strains of S. typhi were recovered from a 49 year old male and a 17 year old female who just returned from Indonesia. The untypable strains had a Z66 flagella antigen instead of the usual H-d antigen.

Salmonella paratyphi

- S.paratyphi A2 were isolated from a 22 year old female who just concluded an Asian tour of Singapore and Thailand, and a 20 year old male who returned from a recent trip to Thailand.
- S.paratyphi B 3aI was recovered from a patient whose case history was unavailable.
- S.paratyphi A1 was isolated from a patient whose personal details are unknown, who had just returned from India and Singapore.

. S.paratyphi B 3a Var 4 was recovered from a 14 year old, sister of the above mentioned 11 year old male typhoid case (S.typhi type F8) who returned from Chile.
. S.paratyphi A UDNC was repeatedly isolated from a carrier detected on routine screening of Vietnamese refugees in December 1984.

OTHER SALMONELLA INFECTIONS

A. ISOLATIONS FROM URINE - comprised the following serotypes:
. S.birkenhead were isolated from a 4 year old male.
. S.bovismorbificans were isolated from 2 adult and one 2 week old females.
. S.bredeney were isolated from a 83 year old female.
. S.havana were isolated from a 85 year old female.
. S.ohlstedt were ioslated from a 26 year old female.
. S.saint paul were isolated from a 12 year old female.
. S.typhimurium UDNC isolated from a 3 year old female.
. S.typhimurium phage type 12A were isolated from a 39 year old female, phage type 135 from a 56 year old renal transplant patient and phage type 141 from a 6 year old male.

B. ISOLATIONS FROM BLOOD - Cases of septicaemia involved the following serotypes:
. S.agona were isolated from a 25 year old male who recently visited the Philippines.
. S.abony were isolated from a 3 year old male.
. S.virchow were isolated from two, 2 year old, females
. S.chester were isolated from a 12 year old male.
. S.morbificans were isolated from a 21 month old male.
. S.typhimurium
- phage type 8 were isolated from a 51 year old male
- phage type 52 were isolated from a 77 year old female
- phage type 145 were isolated from a 69 year old female
- phage type 135 were isolated from a 42 year old male alcoholic with renal failure, a 37 year old male in a febrile phase following a renal transplant and also from another 67 year old male.

Shigella septicaemia was reported in 2 cases involving a 5 year old female infected by Sh flexneri 2, and a 22 month old male infected with Sh sonnei biotype A. Three other septicaemia cases were reported in 2 adult and one 5 week old males with C.jejuni infection.

Other isolations of interest included S.typhimurium phage types 9 and 31 from abscess and phage type 12A from CSF, post-mortem lung tissue, vagina and urethra.

C. CLUSTERS OF ENTERIC INFECTIONS (JANUARY-MARCH 1985)
. S.typhimurium was isolated from 9 out of 10 people in 3 families who dined together at a restaurant in Victoria. Chicken and corn soup was implicated as the source of the food poisoning.

. S.typhimurium phage type 185 outbreak occurred in New South Wales during the Christmas/New Year period and continued on until early March. Most of the cases come from the Sydney Metropolitan area with another focus in the Blue mountains. As reported in CDI 85/7 over 60% of these cases were children under 5.

. S.typhimurium phage type 179 was isolated from 4 boys and 2 teachers following a report of food poisoning at a Victorian school. However no salmonella was recovered in 15 other patients and no definite source was identified.

. Sh sonnei biotype A was isolated in a separate Victorian outbreak, from 2 of the 7 people who ate sandwiches prepared by a woman who was excreting Sh sonnei of the same biotype and antibiotic resistance pattern.

ENTERIC PATHOGENS ACQUIRED OUTSIDE OF AUSTRALIA

In addition to the cases of enteric fever detailed above, the following serotypes were isolated from travellers returning from overseas visits and/or from migrants screened for enteric pathogens upon arrival in Australia.

A. Salmonella species:
- S derby, S hull, S newpost, S stanley and S tennessee were acquired in South East Asia.
- S blockley, S haifa, S muenchen, and S weltevreden were acquired in Malaysia.
- S infantis, S ohio, and S oslo were acquired in Indonesia.
- S agona were acquired in Kenya and India.
- S java taunton var 1 were acquired in Sri Lanka.
- S mbandaka were acquired in India and South East Asia.
- S montevideo were acquired in Fiji.
- S typhimurium phage types 44 and 170 were acquired in the Philippines.
- S virchow were acquired in India, the Philippines, Fiji and South East Asia.

B. Shigella species:
- Sh boydii 2 were acquired in Chile.
- Sh flexneri 2A were acquired in India.
- Sh flexneri 3A were acquired in New Guinea.
- Sh flexneri 4A were acquired in Taiwan.
- Sh flexneri 6 were acquired in Singapore and Fiji.
- Sh sonnei were acquired in South East Asia and India.
- Sh sonnei biotype A were acquired in Thailand.
- Sh sonnei biotype G were acquired in India and Nepal.

C. Campylobacters:
- C jejuni were acquired in Hong Kong, Indonesia and India.
- C species were acquired in Nepal and Sri Lanka.

HUMAN SALMONELLOSIS CASES
Period: January - March 1985

Serotype	Total	ACT	NSW	VIC	QLD	SA	WA	TAS	NT
S. aberdeen	13				13				
S. abony	7				6		1		
S. adelaide	38		2	3	11	2	13		7
S. agona	21	3	2	5	4	1	4		2
S. anatum	35		2		19	3	7		4
S. arizonae	4		1		2		1		
S. bahrenfeld	2		1				1		
S. ball	4						1		3
S. birkenhead	15		4		10			1	
S. blockley	5		1	2			2		
S. bovis-morbificans	57		8	4	5	7	26	1	6
S. brandenburg	1					1			
S. bredeney	7		2	3					2
S. breukelen	1				1				
S. broughton	1				1				
S. chester	56		6		18	3	12	1	16
S. cholerae-suis kunz	1						1		
S. cubana	2		1						1
S. derby	18	2	5	4	1		6		
S. eastbourne	7				3				4
S. emek	3		1	1			1		
S. emmastad	2				1		1		
S. enteritidis	24		1	1	22				
S. fremantle SG II	1						1		
S. give	12			2	1	1	4		4
S. hadar	1				1				
S. haifa	2		1	1					
S. havana	58		2	10	12	5	11		18
S. heidelberg	11				9	1	1		
S. hessarek var 27	1				1				
S. hull	1		1						
S. hvittingfoss	8			1	2		4		1
S. indiana	1		1						
S. infantis	24		7	2	4		7		4
S. jangwani	1						1		
S. java	2		1				1		
S. java 1 var 6	1				1				
S. java battersea	1				1				
S. java taunton var 1	1			1					
S. hava UDNC	4		2	1			1		
S. java untypable	4				1		1		2
S. javiana	1				1				
S. kimberley	2						2		
S. kottbus	3					2	1		
S. krefeld	1		1						
S. lansing	9				6		1		2
S. litchfield	12		1		7		1		3
S. livingstone	3		1				1	1	

Serotype	Total	ACT	NSW	VIC	QLD	SA	WA	TAS	NT
S. lomita	2						2		
S. mbandaka	4		2	1			1		
S. mgulani	1				1				
S. mississippi	13			1				12	
S. montevideo	1		1						
S. muenchen	56		7	3	17	4	15		10
S. newport	17		8	5		1	2	1	
S. ohio	7	1	4	2					
S. ohlstedt	7				1		2		4
S. ohlstedt var 15+	1				1				
S. oranienburg	22			1	2		10		9
S. orientalis	1				1				
S. orion	13						3		10
S. oslo	2			1	1				
S. paratyphi A1	1				1				
S. paratyphi A2	3			2	1				
S. paratyphi A UDNC	7			7					
S. paratyphi B 3A V4	1			1					
S. paratyphi B 3AI	1				1				
S. potsdam	13				7	2	2		2
S. pullorum	1	1							
S. ramatgan	1						1		
S. reading	2				2				
S. rubislaw	21					1	5		15
S. saint paul	67		3	2	32	2	16		12
S. scharzengrund	2		2						
S. senftenberg	22		1	1	1		7		12
S. singapore	29		16	3	4		5	1	
S. sofia SG II	2		2						
S. stanley	2	1		1					
S. tennessee	15		1	1	2		8		3
S. thompson	9				8		1		
S. typhi*	29		8	21					
S. typhimurium*	712	14	365	101	57	66	91	8	10
S. untyp-:Z:1,2 SG 1	1		1						
S. untyp 16:LV: -	5				5				
S. untyp 4:-:-	1			1					
S. urbana	4						2		2
S. victoria	4			4					
S. virchow	135		10	4	110		2	1	8
S. wandsbek SG II	3						2		1
S. wandsworth	11				3		4		4
S. waycross	8		5		2	1			
S. welikade	14				4		3		7
S. weltevreden	5			1		1			3
S. worthington	2		1			1			
S. zanzibar var 15+	1				1				
TOTAL	1770	22	492	205	429	105	299	27	191

Serotype	Total	ACT	NSW	VIC	QLD	SA	WA	TAS	NT
S. typhi *									
S. typhi 40	2		2						
S. typhi B1	1		1						
S. typhi C1	1		1						
S. typhi degraded	2			2					
S. typhi E1	3			3					
S. typhi F8	1			1					
S. typhi M1	3			3					
S. typhi O	6			6					
S. typhi T	2		2						
S. typhi untypable	8		2	6					
TOTAL	29		8	21					
S. typhimurium *									
S. typhimurium	45	1	23				21		
S. typhimurium UDNC 1	7	1	6						
S. typhimurium untypable	23	1	7	3	1	6	5		
phage type 1	4	1	3						
phage type 4	33		9	8	16				
phage type 5	9				2	6	1		
phage type 6	10			6	1	1			2
phage type 8	5			4		1			
phage type 9	38		4	18	1	9	6		
phage type 12A	30		3	4	10	9	4		
phage type 16	1				1				
phage type 21	6			2			4		
phage type 22	11				6	1	4		
phage type 23	2			1			1		
phage type 24	1	1							
phage type 26	8		1	6				1	
phage type 27	5		2	1		1	1		
phage type 29	1		1						
phage type 31	2			2					
phage type 41	1		1						
phage type 44	9		4	2	3				
phage type 52	4		2				2		
phage type 55	4		1				3		
phage type 58	5						5		
phage type 64	25		3				22		
phage type 66	1						1		
phage type 72	4			3			1		
phage type 77	1		1						
phage type 90	2			1		1			
phage type 92	1		1						
phage type 101	9		3		2	3		1	
phage type 102	3		1	2					
phage type 108	8		3	1	2		2		

Serotype	Total	ACT	NSW	VIC	QLD	SA	WA	TAS	NT
phage type 120	1			1					
phage type 124	13		12		1				
phage type 135	314	7	252	11	8	26	5	3	4
phage type 141	14		2	4	1		4	3	
phage type 145	11		3	8					
phage type 154	1								1
phage type 167	2		2						
phage type 170	17	2	10	4	1				
phage type 178	1		1						
phage type 179	17		4	9	1	2	1		
phage type 202	3								3
TOTAL	712	14	365	101	57	66	91	8	10

SALMONELLA HEIDELBERG IN VICTORIA

Contributed by J A C Morris - Microbiological Diagnostic Unit, University of Melbourne.

An outbreak of infection caused by Salmonella heidelberg has been reported in Victoria. Between 14 November 1985 and mid February 1986, the Microbiological Diagnostic Unit (MDU) of the University of Melbourne has serologically identified 25 isolates of S. heidelberg from 18 patients. By contrast, in the period December 1982 to November 1985 the National Salmonella Surveillance Scheme (NSSS) has received only one notification of S. heidelberg from Victoria (April 1985). The present 25 Victorian isolates of S. heidelberg have the same antibiotic resistance pattern which is different to those of most other isolates notified to the NSSS since November 1985 by the Institute of Clinical Pathology and Medical Research, Westmead, NSW (ICPMR) and the Salmonella Reference Laboratory, Adelaide (SRL). The only exception was an isolate from a 1 year old child from South Australia.

The reports from the laboratories for the 3 months to mid February 1986 are summarised in table 1

Table 1. The incidence of S. heidelberg reported by various laboratories between 14 November 1985 and mid February 1986.

	Laboratory		
	ICPMR	SRL	MDU
Number of isolates	10	23	25
Number of patients	9	12	18
Family outbreaks	1*		
Sea Water		5	

* There were 4 isolates from 3 members of this family.

All the Victorian cases to date have been in children, aged 10 or under, as summarised in Table 2.

Table 2. Age distribution of patients from which isolations of S. heidelberg have been made.

Age (years)	1	1-2	2-5	5-10
Number of patients	2	4	7	5

The Victorian Department of Health is investigating these cases further to determine the source of the outbreak.

SUSPECTED OCCUPATIONAL TRANSMISSION OF HEPATITIS B IN GLAZIERS

Based on CDR (1986) 2:4

A possible new occupational risk factor for hepatitis B has been recognised in the UK. A 21 year old male glazier presented with clinical hepatitis and was found to be HBsAg positive, HBeAg positive, anti-HBc positive and anti-HBe negative. He had a history of exposure to a recognised, but non-occupational, risk factor.

There was concern that transmission to his workmates may have occurred because his hands were frequently lacerated through the handling of glass. All 34 employees of the glazing firm were seen and advised not to donate blood prior to the follow up examination, scheduled for 6 months after the onset of symptoms in the index case. A risk score (maximum 10 points) was allocated to each employee based on an assessment of skin trauma, glass-handling frequency, and contact with the index case.

Another man in the same firm presented with jaundice six months after the index case. Serology revealed the same pattern as in the first case. This patient had no known risk factors apart from contact with the index case through work and, indirectly, through glass. His risk score was 10/10. Serology on his wife was negative for hepatitis B antigen and antibody. All the other workers were serologically negative for hepatitis B, except one who had a weak anti-HBc titre, indicative of past but not recent infection.

The glaziers used gloves when handling large sheets of glass but bare hands for smaller pieces. Small lacerations of the hands were sustained daily and contamination of glass with blood, leading to cross-infection, seems the most likely route of transmission of virus between these two cases, although the incubation period was at the upper limit of normal. The uninfected glaziers were in favour of active immunisation against hepatitis B and their general practitioners agreed to vaccinate all at risk.

Both index and secondary cases recovered completely. The current antibody/antigen status of the index case is unknown as he has not been seen recently by his general practitioner. Serologically the secondary case is antigen negative, anti-HBc positive, anti-HBe positive and anti-HBs negative.

SALMONELLA DISTRIBUTION IN HUMANS AND POULTRY

(Contributed by C. Murray, Salmonella Reference Laboratory, Institute of Medical and Veterinary Science, Adelaide).

Raw chicken meat is a major source of salmonella infection within the community. The serotypes most commonly isolated from chicken meat are expected to be reflected in the serotypes isolated from the human population. Possible contamination by salmonella is routinely monitored during the processing of chicken carcasses prior to marketing. Inappropriate handling of the raw meat increases the risk of bacterial contamination both in the processing plant and in the domestic kitchen.

During the period between 1979 and 1984, 30,935 chicken and 17,467 human salmonella isolates were serotyped by the Salmonella Reference Laboratory, Institute of Medical and Veterinary Science, Adelaide. The incidence of a number of serotypes isolated from chickens changed markedly between 1979 and 1984 (Table 1).

TABLE 1. Incidence of Salmonella serotypes in Chickens and Humans for the years 1979 and 1984

(a) Increases in chicken isolates

	Chicken isolates (%)		Human isolates (%)	
	1979	1984	1979	1984
S. sofia	0	35.2	ND	ND
S. singapore	1.2	9.9	ND	ND
S. orion	<0.1	2.3	ND	ND
S. give	<0.1	5.8	ND	ND
Group total	<1.4	53.2	2.5	3.4

(b) Decreases in chicken isolates

S. typhimurium	39.6	10.2	38.6	28.3
S. saintpaul	11.1	0.2	3.4	5.5
Group total	50.7	10.4	42.0	33.8

ND = No data available.

The serotypes which increased in frequency in chickens were S. sofia, S. singapore, S. orion and S. give which represented 1.4% of chicken isolates in 1979 and 53.2% in 1984. In 1979 these serotypes totalled 2.5% of human isolates, and in 1984, 3.4%. The serotypes showing a decrease in isolation frequency in chickens were S. typhimurium and S. saintpaul which represented 50.7% of chicken isolates in 1979 but only 10.4% in 1984. These 2 serotypes accounted for 42.0% of human isolates in 1979 and 33.8% in 1984. It has been speculated that the changes in the level of S. typhimurium and S. saintpaul have been due to either normal variation or the colonisation of

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AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 17/2/86 - 7/3/86 BULLETIN NUMBER 86/5

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	1		7		4	1	8		21
0101 ADENOVIRUS TYPE 1				1		2			3
0102 ADENOVIRUS TYPE 2				1		2		2	5
0103 ADENOVIRUS TYPE 3				1		6		2	9
0105 ADENOVIRUS TYPE 5						1			1
0108 ADENOVIRUS TYPE 8	1								1
0131 ADENOVIRUS TYPE 31						2			2
0199 ADENOVIRUS TYPING PENDING	1				2	1			4
0201 INFLUENZA A VIRUS			5						5
0203 INFLUENZA B VIRUS				1					1
0301 PARAINFLUENZA VIRUS TYPE 1	1				1	1			3
0303 PARAINFLUENZA VIRUS TYPE 3					1	2			3
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)			3				1		4
0500 RHINOVIRUS (ALL TYPES)				4	6	7	2		19
0600 MYCOPLASMA PNEUMONIAE	1		4	3				1	9
0700 ORNITHOSIS-PSITTACOSIS	1			4		1			6
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED						1			1
0816 COXSACKIEVIRUS A16							1		1
0904 COXSACKIEVIRUS B4								1	1
1007 ECHOVIRUS TYPE 7				1				2	3
1021 ECHOVIRUS TYPE 21				2					2
1022 ECHOVIRUS TYPE 22				2		1	1		4
1024 ECHOVIRUS TYPE 24								1	1
1025 ECHOVIRUS TYPE 25						1			1
1100 POLIOVIRUS NOT TYPED			8						8
1101 POLIOVIRUS TYPE 1				1		2			3
1102 POLIOVIRUS TYPE 2	1					2			3
1103 POLIOVIRUS TYPE 3				1		2			3
1104 POLIOVIRUS-VACCINAL STRAIN							2		2
1200 MUMPS VIRUS				3				1	4
1300 HERPES VIRUS GROUP-NOT TYPED	12		1	5			1	1	20
1301 HERPES SIMPLEX VIRUS NOT-TYPED				1					1
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	14		4	5				16	39
1303 VARICELLA-ZOSTER VIRUS	1		1	4		2	2		10
1306 HERPES SIMPLEX TYPE 1	20		18	27		22	32	23	142
1307 HERPES SIMPLEX TYPE 2	92		35	75	2	28	56	46	334
1399 HERPES VIRUS TYPING PENDING					2				2
1401 COXIELLA BURNETI	1			1					2
1502 PICORNA VIRUS-NOT TYPED	3		9				7	4	23
1521 MEASLES VIRUS				1					1
1522 RUBELLA VIRUS	2			5				4	11
1532 HEPATITIS B ANTIGEN	51		6	25	2	11	16	21	132
1535 HEPATITIS A ANTIBODY				7		14	3	33	57
1541 CHLAMYDIA A - C TRACHOMATIS	25		1			34	5	53	118
1555 PAPOVAVIRUS GROUP (PAPILLOMA-HUMAN WART)				1					1
1556 CMV - CYTOMEGALOVIRUS	2		1	41	5	5	12		66
1564 ROTAVIRUS	4				2	7		2	15
1566 NORWALK AGENT					1				1
1599 ENTEROVIRUS TYPING PENDING			7		3				10
9992 ROSS RIVER VIRUS			4	38				6	48
9995 DENGUE								1	1
Total	234		114	261	31	158	149	220	1,167

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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	Hepatic	CVS	Urinary	Skin/mucs memb
0101 ADENOVIRUS TYPE 1							2				
0102 ADENOVIRUS TYPE 2	1	2				1	2				
0103 ADENOVIRUS TYPE 3		1					4				1
0105 ADENOVIRUS TYPE 5							1				
0131 ADENOVIRUS TYPE 31							2				
0201 INFLUENZA A VIRUS	3	2									
0203 INFLUENZA B VIRUS		1									
0301 PARAINFLUENZA VIRUS TYPE 1		2					1				
0303 PARAINFLUENZA VIRUS TYPE 3		2									
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)		3									
0500 RHINOVIRUS (ALL TYPES)		14									
0600 MYCOPLASMA PNEUMONIAE	1	5					1				
0700 ORNITHOSIS-PSITTACOSIS		4									
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED											1
0816 COXSACKIEVIRUS A16											1
0904 COXSACKIEVIRUS B4		1					1				
1007 ECHOVIRUS TYPE 7				1		1	1				
1021 ECHOVIRUS TYPE 21				2							
1022 ECHOVIRUS TYPE 22		1				1	1				
1024 ECHOVIRUS TYPE 24		1									
1025 ECHOVIRUS TYPE 25							1				
1101 POLIOVIRUS TYPE 1							2				
1102 POLIOVIRUS TYPE 2	1	1					1				
1103 POLIOVIRUS TYPE 3		1					1				
1104 POLIOVIRUS-VACCINAL STRAIN							1				
1200 MUMPS VIRUS				1							
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	5	6				4		2			
1303 VARICELLA-ZOSTER VIRUS				1		1					8
1306 HERPES SIMPLEX TYPE 1	10	5									70
1307 HERPES SIMPLEX TYPE 2	18	2									59
1401 COXIELLA BURNETI	1								1		
1502 PICORNA VIRUS-NOT TYPED		4		2			4		1		
1521 MEASLES VIRUS		1									
1522 RUBELLA VIRUS											8
1532 HEPATITIS B ANTIGEN	52							71			
1535 HEPATITIS A ANTIBODY	7							42			
1555 PAPOVAVIRUS GROUP (PAPILLOMA-HUMAN WART)											1
1556 CMV - CYTOMEGALOVIRUS	5	10		2			3	3	1	4	2
1564 ROTAVIRUS							15				
1566 NORWALK AGENT	1										
9992 ROSS RIVER VIRUS	3										37
Total	109	69		9		8	44	119	3	4	190

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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	Genital	Endo/sal gland	RES	Muscle/joint	Congenital	PUO	Fever/malaise	Other	SIDS
0101 ADENOVIRUS TYPE 1.....	1									
0102 ADENOVIRUS TYPE 2.....								1		
0103 ADENOVIRUS TYPE 3.....	3						1			
0108 ADENOVIRUS TYPE 8.....	1									
0303 PARAINFLUENZA VIRUS TYPE 3....							1			
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....					1					
0500 RHINOVIRUS (ALL TYPES).....					1					
0600 MYCOPLASMA PNEUMONIAE.....							1	1	1	
0700 ORNITHOSIS-PSITTACOSIS.....							2			
1022 ECHOVIRUS TYPE 22.....								1	1	
1101 POLIOVIRUS TYPE 1.....										1
1103 POLIOVIRUS TYPE 3.....										1
1104 POLIOVIRUS-VACCINAL STRAIN....										1
1200 MUMPS VIRUS.....			3						1	
1300 HERPES VIRUS GROUP-NOT TYPED..		1								
1302 EPSTEIN-BARR VIRUS (EB VIRUS).			15	1			2	7	3	
1303 VARICELLA-ZOSTER VIRUS.....									1	
1306 HERPES SIMPLEX TYPE 1.....	4	49						4	1	
1307 HERPES SIMPLEX TYPE 2.....		256					1			
1502 PICORNA VIRUS-NOT TYPED.....								2		
1522 RUBELLA VIRUS.....								1	2	
1532 HEPATITIS B ANTIGEN.....						1			9	
1535 HEPATITIS A ANTIBODY.....								1	7	
1541 CHLAMYDIA A - C.TRACHOMATIS...	4	114								
1556 CMV - CYTOMEGALOVIRUS.....		6	1	1		2	3	5	24	
9992 ROSS RIVER VIRUS.....			2		43		1	1		
9995 DENGUE.....									1	
Total.....	13	426	21	2	45	3	12	24	51	3

NOTIFIABLE DISEASES REPORTED IN AUSTRALIA

PERIOD 11
6 October 1985 to 2 November 1985

Bulletin 86/5

Disease	N.S.W.	VIC	QLD	S.A.	W.A.	TAS.	N.T.	A.C.T.	Total	CUMULATIVE TOTAL TO DATE FOR YEAR
Amoebiasis	3	20	3						26	52
Ankylostomiasis							N.N.		–	34
Anthrax									–	–
Arbovirus infection	5		18		1				24	491
Brucellosis	1		1						2	15
Campylobacter infections	61	N.N.	N.N.	104	5	N.N.	1	N.N.	171	1,859
Chancroid				N.N.		N.N.			–	8
Cholera									–	–
Congenital rubella syndrome		N.N.	N.N.			N.N.		N.N.	–	3
Diphtheria							5		5	17
Donovanosis		N.N.		N.N.	1	N.N.	7		8	73
Giardiasis	15	N.N.	N.N.	41	N.N.	N.N.	N.N.	N.N.	56	955
Genital herpes	104	N.N.	5	23	N.N.	N.N.	2		134	1,396
Gonococcal ophthalmia neonatorum		N.N.	N.N.		N.N.	N.N.		N.N.	–	5
Gonorrhoea	106	110	28	39	107	1	71	2	464	6,434
Hepatitis A (infectious)	23	4	18	13	17		8		83	669
Hepatitis B (serum)	38	13	25	6	30	2	17		131	1,435
Hepatitis – unspecified	1		N.N.		4	N.N	1		6	99
Hydatid disease									–	11
Lassa Fever		N.N	N.N.			N.N.	N.N.	N.N.	–	1
Legionnaires' disease			N.N.	1	2	N.N.		N.N.	3	20
Leprosy	3				1		1		5	37
Leptospirosis	3	1	4	1					9	161
Lymphogranuloma venereum		N.N.	N.N.	N.N.	N.N.	N.N.	3		3	7
Malaria	6	3	7	1	3	1		1	22	521
Marburg Disease		N.N.	N.N.			N.N.	N.N.	N.N.	–	–
Meningococcal infections	2			1	1	N.N.		1	5	49
Non-specific urethritis	322	N.N.	2	89	N.N.	N.N.		N.N.	413	4,025
Ornithosis									–	8
Pertussis (whooping cough)	32	16	N.N.	9	4	N.N.	N.N.	N.N.	61	442
Plague									–	–
Poliomyelitis									–	–
Q. fever	5		3				N.N.		8	169
Rabies		N.N	N.N.	N.N.		N.N.	N N.	N.N.	–	–

2.

DISEASE	N.S.W.	VIC	QLD	S.A.	W.A.	TAS.	N.T.	A.C.T.	Total	CUMULATIVE TOTAL TO DATE FOR YEAR
Salmonella infections	48	21	17	11	7	2	16	1	123	2,314
Shigella infections	10		14	2	8		25		59	646
Smallpox									–	–
Syphilis	32	5	3	16	21		132	2	211	1,987
Tetanus		1	1						2	10
Trachoma		N.N.				N.N.	N.N.		–	63
Tuberculosis (all forms)	30	13	9	10	10	1	1	4	78	938
Typhoid fever	2	1						1	4	27
Typhus (all forms)									–	5
Vibrio parahaemolyticus infections		N.N.	N.N.			N.N.		N.N.	–	4
Yellow Fever									–	–
Yersinia enterocolitica infections	3	N.N.	N.N.			N.N.		N.N.	3	37

(Note: 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.)

N.N. Not Notifiable

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chickens by S. sofia. A wide range of S. typhimurium phage types is known to colonise both man and animals, and any proposal to examine changes in distribution will necessitate a phage type survey in man and chickens.

These data indicate that changes in serotype frequency distribution in chicken meat are not reflected in changes in frequency of human infection with these serotypes. There is ample evidence that Salmonella serotypes vary in their pathogenicity for humans and animals, and in their capacity to spread through the food chain. Future work may provide information about the factors which influence the frequency of human infection with particular serotypes.