AUSTRALIA

Bulletin Number 79/25
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Communicable Diseases Intelligence

This is the final issue of C.D.I. this year, and the 1979 index is issued with it. The next issue will be on 18 January 1980.

The editorial staff would like to take this opportunity of extending the seasons greetings to all readers, with best wishes for 1980.

Virus reports this period - 719 with reports from one laboratory not received due to postal delays. Reports of interest include:

- Echovirus type 11 - 108 reports in spite of one laboratory missing, compared with a total of 75 last period. An increase was noted in all States except Western Australia, and 56 of the 108 were from patients with meningitis or encephalitis. One isolation was from a post-mortem specimen from a neonate.

  In view of the recent press publicity on this subject, it might be noted that an additional 26 cases were reported as having either meningitis or encephalitis. Of these, nine were due to mumps virus, five to coxsackie infections (A9, B2 and B3), two each to echovirus type 30 and herpes, one to measles, six to as yet untyped enteroviruses, and one 22 year old male with meningitis reported by the State Health Laboratory, Brisbane, who had a positive IgM for Ross River virus.

  The State breakdowns for viral meningitis for all viruses reported this period were:

  N.S.W. plus A.C.T. - 39, Vic. - 29 (one laboratory outstanding)
  Qld - 12, S.A. - 2

- Influenza $H3N2$ - The Institute of Medical and Veterinary Science in Adelaide reports that the $H3N2$ Influenza A strain quoted in CDI 79/21, has been further characterised by Morris Everard at the WHO Influenza Reference Centre at CSL, Melbourne, and the results confirmed by the WHO Centre in London. This isolation has been shown to be almost identical serologically with A/NT/60/68, one of the earliest $H3N2$ variants which appeared in 1968.

  There are no epidemiological data available from the family as yet to help explain the reappearance of this variant after such an interval.

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Campylobacter infection associated with septic abortion (contributed by G.L. Gilbert, Clinical Microbiologist, Royal Women's Hospital, Brisbane)

Campylobacter fetus subsp. jejuni was isolated from blood cultures from a 24 year old woman who had been admitted during the first pregnancy at approximately 14 weeks gestation. She had a one week history of "shaking chills", sweating and nausea. There had been no diarrhoea, abdominal pain or respiratory symptoms. A clinical diagnosis of a septic missed abortion was made and foetal death was confirmed by sonar examination. After blood and other cultures were taken, treatment was began with intravenous cephalothin and oral metronidazole. Despite this, fever and rigors continued in hospital. On the fourth day after admission (and two days after antibiotic therapy had begun,) the uterus was evacuated (with intravenous Syntocinon followed by suction curettage) and thereafter the patient was afebrile and asymptomatic.

C. fetus subsp. jejuni serogroup C was isolated from four of six blood culture bottles (each set of two bottles consisted of one of tryptose soy broth and one modified Schaedler's broth) after 3-5 days incubation. The organism grew on subculture on chocolate agar in 5% CO_2 at 37°. It was identified by Dr Margaret Peel and Mr Mervyn Withers at the Microbiological Diagnostic Unit, University of Melbourne and serogrouped by Dr.B.L. Clark, C.S.I.R.O. Division of Animal Health, Parkville. Antibiotic sensitivity tests* showed that the organism was sensitive to tetracycline (<0.25), gentamicin (0.5), chloramphenicol (2), ampicillin (4) and metronidazole (0.5). It was resistant to cephalothin (64), sulphonamide (>64) and cotrimoxazole (>8 trimethoprim/152 sulphamethoxazole). Disc diffusion tests also showed it to be resistant to five cephalosporins (including cefamandole) and sensitive to cefoxitin, erythromycin and clindamycin.

Pathological examination of the placenta showed inflammation and areas of infarction consistent with infection. Appropriate cultures for C. fetus were not taken from the aborted foetus or placenta.

Specific questioning of the patient revealed that she had been eating a considerable quantity of homemade ricotta cheese, made from unpasteurized goat's milk. (Unfortunately cheese from the same source was not available for culture as it was no longer being made). There was no other likely source of exposure to the organism.

Factitious bacteraemia (contributed by Dr C. Dorman, Institute of Pathology, Royal Alexandra Hospital for Children, N.S.W.)

An infant, one year of age, was admitted to hospital suffering from severe laryngotracheobronchitis. He was febrile on admission and blood was taken for culture.

On the following day gram negative pleomorphic bacilli, somewhat resembling haemophilus, were seen in a film prepared from the blood culture. The infant was still febrile and on the basis of the above findings was commenced on intravenous ampicillin and chloramphenicol. His fever subsided

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* Figures in brackets are minimum inhibitory concentrations (ug/ml) which were done using the "Sensititre" kit (Seward Lab.), with the exception of metronidazole which was tested by agar dilution.

rapidly. However no growth was obtained in subcultures made from the blood culture.

Films from 6 uninoculated blood culture bottles of the same batch all revealed similar gram negative bacilli. No organisms were found in the films from several bottles of a different type of culture medium from the same manufacturer.

As a result of these findings, and in view of the patient's clinical improvement, intravenous therapy was suspended and treatment continued with oral amoxycillin.

This batch of tryptone soy broth was the first of a commercially prepared product on trial in the laboratory. The broth had probably been prepared under conditions allowing the growth of bacteria which was subsequently killed by autoclaving. The importance of preparing blood culture media free of both living and dead bacteria is well known but may not be fully appreciated by all commercial manufacturers of such media.

(The company concerned has withdrawn all stocks of the affected batch.)

Female genital actinomycosis and the intra-uterine device (Reproduced from the Communicable Diseases Report 79/39 (U.K.). Author: Dr M. Charnock, Department of Reproductive Physiology, St. Bartholomew's Hospital, London.)

Until 1970 actinomycosis of the female genital organs was a very rare disease with only 200 recorded cases in the world literature. Since 1973 many cases have been reported in association with use of the intra-uterine device (IUD) from the United Kingdom, Canada, Europe and the United States.

There are no specific features to distinguish this form from other varieties of pelvic infection. It must be suspected whenever salpingitis is diagnosed in association with use of the intra-uterine device. A vague systemic illness may have preceded the onset of acute symptoms. The presence of a pelvic mass is suspicious and was noted in all four cases reported recently[1]. A poor clinical response followed therapy with various antibiotics including ampicillin, metronidazole, gentamicin and tetracycline.

Laboratory diagnosis is possible only with a careful search for sulphur granules, with meticulous prolonged anaerobic culture and with thorough microscopic examination of surgical specimens. Although at least 10 cases are known to have occurred in London alone in the past 5 years, this is probably a considerable under-estimate of the incidence because the diagnosis is so easily missed.

Cure is usual with prolonged antibiotic therapy and excision of the diseased tissues but a fatality has recently occurred.[2] Penicillin has been the antibiotic of choice. Initial doses of up to 20 million units daily are followed by smaller doses for up to 2 years in order to prevent recurrence. Other antibiotics such as chloramphenicol, ampicillin, tetracycline, lincomycin and metronidazole have been used in attempts to eradicate other associated anaerobes and gram-negative bacteria. Careful trials are needed to establish the best regime.

Actinomyces israelii can be detected in the lower genital tract by routine cervical cytology[3] but occurs only in the presence of a foreign body. The significance of the presence of the organism in 1-10%[4,5], of all IUD-users is unknown, but screening of IUD-users by cervical cytology may detect women at risk of developing severe disease. The presence of the organism should be carefully sought for in smears of IUD-users with pelvic inflammation as a possible clue to the bacteriological diagnosis.

References

1. Charnock, M. and Chambers, T.J. Lancet, 1979, 1, 1239.
2. Hager, W.D., Majmudar, B. Am.J.Obstet. Gynec., 1979, 133, 60.
3. Gupta, P.K., Hollander, D.H., Frost, J.K. Acta Cytologica (Baltimore), 1976, 20, 295.
4. Linder, A.M. 1979 - personal communication.
5. Gupta, P.K. 1979 - personal communication.

tional surveillance for Guillain-Barré Syndrome (U.S.A.) (based on MMWR, 23 November 1979)

As at September 1, 1979, a total of 1019 cases of Guillain-Barré syndrome (GBS) had been reported to the Centre for Disease Control, Atlanta, Georgia, U.S.A. (CDC) with dates of onset between January 1, 1978 and March 31, 1979. The attack rate among reported cases was significantly higher in males than in females. A positive correlation between advancing age and attack rate was also noted.

A major purpose of the surveillance effort was to determine whether or not an increased risk of vaccine-related GBS existed for the approximately 12.5 million doses of influenza vaccine administered in the 1978-79 campaign when compared to the previously documented risk associated with A/New Jersey (swine) influenza vaccine administered during the 1976 National Influenza Immunization Program. To evaluate the possible association between GBS and the 1978-79 influenza vaccine, cases reported with onset between September 1, 78 (the start of the influenza vaccine campaign) and March 31, 1979 (approximately 8 weeks after most of the vaccine had been administered) were analyzed.

During this period, CDC received reports of 12 adults who had onset of GBS within 8 weeks afrer receiving the influenza vaccine. A total of 391 cases of GBS in adults who had not recently been vaccinated were also reported. The rates and risks of GBS in adults not recently vaccinated and in those vaccinated within 8 weeks before onset of GBS were calculated and compared, using estimates of the number of adults vaccinated between September 1978 and January 1979. For the 1978-79 influenza vaccine, the relative risk of vaccine-associated GBS was 1.4 (0.7-2.7).* The risk associated with the 1978-79 vaccine was statistically significantly below that associated with A/New Jersey influenza vaccine for the equivalent 8-week

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* 95% confidence interval. Relative risk equals the rate in adults vaccinated within 8 weeks before onset of GBS divided by the rate in adults not vaccinated within the same time period.

period (8.2). The relative risk of 1.4 is not significantly different from 1.0, suggesting that a statistically significant excess risk of GBS following receipt of the influenza vaccine administered in 1978 could not be demonstrated.

These data are based on reports from voluntarily participating neurologists, and, as in any broad surveillance effort, case reporting is not complete. However, it is probable that recently vaccinated cases would be at least as likely (if not more likely) to be reported as would unvaccinated cases.

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

S. typhi phage type 46 isolated from 42 year old male with fever, diarrhoea and vomiting on arrival in Melbourne after travelling in Peru and Fiji. The infection was probably acquired in South America where phage type 46 is common. (Vic.)

Further cultures of S. typhi phage type E_1 isolated from the 51 year old female psychiatric hospital inpatient mentioned in the September report (CDI 79/23). Cultures which were untypable (Vi deficient) and which gave degraded reactions with the typing phages were also isolated. There were no other isolations of S. typhi from staff or patients in the ward. (Vic.)

S. paratyphi A phage type 5 isolated from blood culture of 71 year old female who arrived from Djakarta 8 days before. She had a 6 month history of anorexia and abdominal pain which had become worse. (Vic.)

S. typhimurium phage type 179 still remains the most common phage type, followed by phage type 135. Both these phage types are commonly found in poultry.

In late September and early October there was an increase in the number of isolations of S. typhimurium from a N.S.W. country town and its surrounding district. Of ten cultures of S. typhimurium phage typed from this area 6 were type 135, three were type 4 and one was type 26. There was also an outbreak of food poisoning due to S. typhimurium phage type 170 in the town in late October. Further details are expected later.

The "four possible isolates of S. paratyphi B phage type Dundee" reported in CDI 79/23 have now been identified as S. java phage type Dundee.

β-lactamase producing N. gonorrhoeae

Two isolations of this organism have been reported by the Microbiological Diagnostic Unit, University of Melbourne, for the month of November. They were a 40 year old male seaman whose infection was stated to have been contracted in Perth (W.A.), and a 25 year old male whose source of infection was Bangkok. This brings the total notified since July 1st this year to nine.

Seasonal Warnings

Salmonella infection associated with pre-cut watermelons

The MMWR of 9 November 1979 reported 18 persons in Illinois, U.S.A., with illness compatible with salmonellosis from whom S. oranienburg was isolated. All had eaten pre-cut watermelon bought from one particular supermarket. It had been the practice of the supermarket to cut up damaged watermelons, cover the cut surface with plastic wrap, and display them, sometimes without refrigeration, until sold.

The Editor commented that watermelon is an unusual vehicle of salmonellosis. Although the moist, highly sugared watermelon interior would theoretically be a good culture medium, the thick rind is a barrier to bacterial contamination. In one well-documented outbreak of salmonellosis attributed to precut watermelon, S. miami was isolated from stools of 9 ill persons, from leftover watermelon from 2 involved households, and from the shelf where the knife used to cut the watermelons was kept (1) Laboratory study found that the inside of a watermelon could be contaminated at the time of slicing if salmonellae were present on the rind of the watermelon or if a watermelon free of Salmonella on the exterior was cut with a knife contaminated with the organism.

Reference

1. Gaylor EE, et al: An outbreak of salmonellosis traced to watermelon. Public Health Rep (1955) 70:311-313.

Food poisoning from red kidney beans (based on Communicable Diseases Report 79/47)

There have been recent reports of food poisoning following the ingestion of raw or insufficiently cooked red beans (Phaseolus vulgaris), frequently used in salads. Symptoms have included nausea, severe vomiting, diarrhoea and abdominal distension. The severity has varied from mild to moderately severe; in one occurrence it was directly related to the amount of beans ingested. Vomiting and diarrhoea when they occurred developed respectively two hours and four hours after ingestion. Symptoms have lasted up to 16 hours but in some cases general weakness has persisted for two days.

Cultures for bacterial pathogens, usually associated with food poisoning, have been negative and faecal cultures have yielded only expected intestinal flora.

One of the incidents involved the use of a "slow-cooking" casserole with the late addition of raw beans; the recipe had specified cooked beans.

It has been suggested that cooking had been insufficient to inactivate toxic factors present in the beans. Factors identified in red beans and known to be destroyed by prolonged heating are:

(1) a trypsin inhibitor, which stimulates over-production of pancreatic digestive enzymes
(2) haemagglutinins, which may impair the absorption of digestive products, and
(3) a goitrogen

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VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES

VIRUS OR VIRAL ANTIGEN	ICPMR (NSW) / WHO (ALT)	RAHC (NSW)	PHH/ PDW (NSW)	FAIR-FIELD (VIC)	RCH (VIC)	IMVS (SA)	STATE LAB (QLD)	STATE LAB (WA)	T
0100 ADENOVIRUS NOT TYPED	3		5	4		3			15
0101 ADENOVIRUS TYPE 1				1		2		1	4
0102 ADENOVIRUS TYPE 2	2			5		3			10
0103 ADENOVIRUS TYPE 3	1					1			2
0105 ADENOVIRUS TYPE 5				3		1			4
0107 ADENOVIRUS TYPE 7				1					1
0199 ADENOVIRUS TYPING PENDING						6			6
0201 INFLUENZA A VIRUS	1			1					2
0203 INFLUENZA B VIRUS							2		2
0301 PARAINFLUENZA VIRUS TYPE 1		1					1		2
0302 PARAINFLUENZA VIRUS TYPE 2						1	1		2
0303 PARAINFLUENZA VIRUS TYPE 3				4		1	4	1	10
0399 PARAINFLUENZA VIRUS TYPING PENDING						2			2
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)						6			6
0500 RHINOVIRUS (ALL TYPES)				2		6			8
0600 MYCOPLASMA PNEUMONIAE			4			2	11	1	18
0700 ORNITHOSIS-PSITTACOSIS	4			2					6
0809 COXSACKIEVIRUS A9	1			1			1		3
0902 COXSACKIEVIRUS B2		1					4		5
0903 COXSACKIEVIRUS B3				1		1			2
0904 COXSACKIEVIRUS B4	1	1				1	2	1	6
1011 ECHOVIRUS TYPE 11	34	7	8	33		8	18		108
1020 ECHOVIRUS TYPE 20								2	2
1022 ECHOVIRUS TYPE 22	1								1
1030 ECHOVIRUS TYPE 30				1			3		4
1099 ECHOVIRUS TYPING PENDING							1		1
1101 POLIOVIRUS TYPE 1								1	1
1102 POLIOVIRUS TYPE 2						1			1
1103 POLIOVIRUS TYPE 3						3	1		4
1104 POLIOVIRUS-VACCINAL STRAIN	1								1
1200 MUMPS VIRUS	8	5	3	[redacted]		2	4	1	26
1300 HERPES VIRUS GROUP-NOT TYPED				2		3			5

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VIRAL IDENTIFICATIONS CATEGORISED INTO SOURCE SPECIMENS-CONTINUED

VIRUS OR VIRAL ANTIGEN	FA	BL	NA	CS	SK	EY	UR	BR	GE	CT	TOTAL
1302 EPSTEIN-BARR VIRUS (EB VIRUS).....		2									2
1303 VARICELLA-ZOSTER VIRUS.....		3			2						5
1306 HERPES SIMPLEX TYPE 1.....	1		13		20	2			3		39
1307 HERPES SIMPLEX TYPE 2.....					3				50		53
1399 HERPES VIRUS TYPING PENDING.....			2		1				4		7
1401 COXIELLA BURNETI.....		25									25
1514 MOLLUSCUM CONTAGIOSUM.....									1		1
1515 CONTAGIOUS PUSTULAR DERMATITIS (ORF VIRUS).....					1						1
1521 MEASLES VIRUS.....		12	2	1						1	16
1522 RUBELLA VIRUS.....		40	1								41
1530 HEPATITIS A VIRUS.....	1	15									16
1532 HEPATITIS B ANTIGEN.....		54									54
1535 HEPATITIS A ANTIBODY.....		6									6
1541 CHLAMYDIA A - TRIC TYPE.....									35		35
1556 CMV - CYTOMEGALOVIRUS.....		14	8				15			3	40
1564 ROTAVIRUS.....	25										25
1599 ENTEROVIRUS TYPING PENDING.....	2		3	8							13
ROSS RIVER VIRUS		10									10
SMALL VIRUS (LIKE) PARTICLE	3										3
TOTAL.....	103	245	128	59	56	7	19		110	12	739

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VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES-CONTINUED

VIRUS OR VIRAL ANTIGEN	ICPMR (NSW)/ WVH (ACT)	RAHC (NSW)	PHH/ PDN (NSW)	FAIR-FIELD (VIC)	RCH (VIC)	IMVS (SA)	STATE LAB (QLD)	STATE LAB (WA)	T
1301 HERPES SIMPLEX VIRUS-NOT TYPED	14		1	2		2	19	23	61
1302 EPSTEIN-BARR VIRUS (EB VIRUS)								2	2
1303 VARICELLA-ZOSTER VIRUS	2		1			1	1		5
1306 HERPES SIMPLEX TYPE 1	9		2	15		12			38
1307 HERPES SIMPLEX TYPE 2	25		3	15		10			53
1399 HERPES VIRUS TYPING PENDING			6			1			7
1401 COXIELLA BURNETI	10		1	1		1	12		25
1514 MOLLUSCUM CONTAGIOSUM						1			1
1515 CONTAGIOUS PUSTULAR DERMATITIS (ORF VIRUS)						1			1
1521 MEASLES VIRUS	2			2		8	3	1	16
1522 RUBELLA VIRUS	4	1		7		11	9	9	41
1538 HEPATITIS A VIRUS	1							15	16
1532 HEPATITIS B ANTIGEN	3		10	21		1	8	11	54
1535 HEPATITIS A ANTIBODY						6			6
1541 CHLAMYDIA A - TRIC TYPE	14		2					19	35
1556 CMV - CYTOMEGALOVIRUS	7	1	5	11		6	5		35
1564 ROTAVIRUS	7			1		7		12	27
1599 ENTEROVIRUS TYPING PENDING			10			3			13
ROSS RIVER VIRUS						1	8	1	10
SMALL VIRUS (LIKE) PARTICLE	1			2					3
TOTAL	156	17	61	141		125	118	101	719

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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	5	10									15
0101 ADENOVIRUS TYPE 1	1		2							1	4
0102 ADENOVIRUS TYPE 2	5		5								10
0103 ADENOVIRUS TYPE 3	1					1					2
0105 ADENOVIRUS TYPE 5			4								4
0107 ADENOVIRUS TYPE 7	1										1
0199 ADENOVIRUS TYPING PENDING	1		3			2					6
0201 INFLUENZA A VIRUS		2									2
0203 INFLUENZA B VIRUS		2									2
0301 PARAINFLUENZA VIRUS TYPE 1		1	1								2
0302 PARAINFLUENZA VIRUS TYPE 2		2									2
0303 PARAINFLUENZA VIRUS TYPE 3	1	2	7								10
0399 PARAINFLUENZA VIRUS TYPING PENDING			2								2
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)		1	5								6
0500 RHINOVIRUS (ALL TYPES)			7							1	8
0600 MYCOPLASMA PNEUMONIAE		18									18
0700 ORNITHOSIS-PSITTACOSIS		6									6
0809 COXSACKIEVIRUS A9				3							3
0902 COXSACKIEVIRUS B2	3		2								5
0903 COXSACKIEVIRUS B3	1		1								2
0904 COXSACKIEVIRUS B4	5		4								9
1011 ECHOVIRUS TYPE 11	37		40	39			4			1	121
1020 ECHOVIRUS TYPE 20	1		1								2
1022 ECHOVIRUS TYPE 22			1								1
1030 ECHOVIRUS TYPE 30	1		2	1							4
1099 ECHOVIRUS TYPING PENDING	1										1
1101 POLIOVIRUS TYPE 1	1										1
1102 POLIOVIRUS TYPE 2										1	1
1103 POLIOVIRUS TYPE 3	4										4
1104 POLIOVIRUS-VACCINAL STRAIN	1										1
1200 MUMPS VIRUS		15	4	7							26
1300 HERPES VIRUS GROUP-NOT TYPED					4				1		5
1301 HERPES SIMPLEX VIRUS-NOT TYPED	1	5	8			2			16	4	61

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(c) = correction/amendment of earlier articles

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