LOUISIANA MONTHLY MORBIDITY

DISEASES REPORTED DURING MONTH OF FEBRUARY, 1973 BY PARISH OF RESIDENCE

THE MENINGOCOCCUS MAKES NEWS IN LOUISIANA

During the months of January and February two unusual events occurred in Louisiana. In the first, group A meningococcus was isolated from a 3 year old male from Jefferson Parish with meningitis. The child became ill without known exposure to an active meningococcal case, had no history of recent travel outside of the United States and enjoyed a prompt recovery from his infection with penicillin therapy. There were no additional cases of meningococcal disease noted in the child's family or neighboring families.

In the second case, four of five children in a single family residing in Orleans Parish, developed meningococcemia. The affected children ranged in age from 4 months to 7 years. Each noted onset of symptoms during the 5 day period of December 31 to January 5. All were hospitalized at Charity Hospital in New Orleans on January 6 for meningococcemia. In 3 of the children this diagnosis was confirmed with blood cultures positive for group C meningococcus (antibiotic sensitivities not tested). Two of these presented with petechial rashes. The fourth child had negative blood cultures, but presented with clinical symptoms compatible with septicemia (hypotension, coma and purpura). In addition to this, gram stain of fluid taken from purpuric lesions on the child's legs revealed "? gram positive diplococci." All four children received

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RELEASED March 14, 1973	ASEPTIC MENINGITIS	DIPHTHERIA	ENCEPHALITIS	ENCEPHALITIS, POST INFECTIOUS	INFECTIOUS AND SERUM HEPATITIS	TUBERCULOSIS, PULMONARY	MENINGOCOCCAL INFECTIONS	PERTUSSIS	POLIOMYELITIS, PARALYTIC	RABIES IN ANIMALS	RHEUMATIC FEVER	RUBELLA *	SHIGELLOSIS	TYPHOID FEVER	OTHER SALMONELLOSIS	TETANUS	MEASLES	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY
TOTAL TO DATE 19 72	6	3	0	0	107	78	14	4	0	7	2	8	4	0	19	2	12	2080	117
TOTAL TO DATE 19 73	11	0	2	1	131	131	4	4	0	5	2	13	47	0	34	0	15	3250	140
TOTAL THIS MONTH	2	0	0	0	56	82	3	3	0	3	0	13	31	0	14	0	15	1784	81
ACADIA					1										1			12	
ALLEN						1												2	
ASCENSION						1												1	
ASSUMPTION																		6	
AVOYELLES																		1	
BEAUREGARD						2												4	2
BIENVILLE																			1
BOSSIER					5													52	3
CADDO					4	2									2		1	209	4
CALCASIEU						1									1			39	
CALDWELL						1	1											3	
CAMERON																			
CATAHOULA						1													
CLAIBORNE																		3	
CONCORDIA																		1	2
DESOTO																		6	
EAST BATON ROUGE					7	5							2		4		9	84	12
EAST CARROLL																		11	1
EAST FELICIANA						1												1	
EVANGELINE						2												15	
FRANKLIN																		1	
GRANT										1							1		
IBERIA						2												1	1
IBERVILLE																			

* Includes Rubella, Congenital Syndrome

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lumbar punctures. In each case the spinal fluid was sterile and contained normal cells, protein and sugar. All four children were treated with a combination of penicillin sulfadiazine and solucortef. All recovered and are currently in good health. Prior to this outbreak, all of the children had enjoyed excellent health. There was no family history of diabetes, blood dyscrasias, or unusual susceptibility to infections. Nasopharyngeal swabs were obtained from the entire family on February 26. One of these, obtained from the youngest child, yielded Neisseria meningitidis. This isolate has been forwarded to the Center for Disease Control in Atlanta where serotype and antibiotic sensitivities are being examined.

The appearance of group A meningococcus in Louisiana is of interest for a number of reasons. This type meningococcus has in the past been responsible for major epidemics in the United States, though, welcomely, it has been seen only sporadically in this country during the past two decades. Of 240 isolates of meningococcus forwarded to the Center for Disease Control for typing in 1972, only 3 were found to belong to the group A serotype. Canada, unlike the United States has noted a recent increase in group A meningococcal activity. Though there is no evidence at the present time to indicate that the group A meningococcus prevalent in Canada is finding its way into the United States to any significant degree, this is a future possibility that can not be overlooked.

The occurrence of four cases of meningococcemia in the absence of meningitis in a single family is an even more unusual event. Of 17 cases of meningococcal disease examined by Foster et al between 1966 and 1967, only one was found to have meningococcemia without meningitis. Christie reports that in over 90% of cases in which infection with meningococcus causes illness, this takes the form of meningitis and the signs and symptoms of meningeal inflammation are clinically obvious. Why four members of the Orleans Parish family developed meningococcemia without meningitis is a mystery.

Christie points out that most of the bactericidal activity of the serum for meningococci appears to reside in the gamma-M fraction and that deficiency of this immuno globulin has been found in some fatal cases of fulminating meningococcal septicemia. However, in the absence of any prior history of unusual susceptibility to infections in this family, it would be difficult to imagine an immunological deficiency as an underlying element in this outbreak.

Crowded living conditions have frequently been implicated as a major contributor to the spread of a wide variety of infectious diseases. The family under consideration lives in extremely close quarters, with the six members of the household sleeping in 3 beds in two small adjourning rooms. This factor may, indeed, have contributed to the rapid spread of meningococcal disease in this family. Certainly, such a hypothesis would be in agreement with the findings of Foster et al who in their review of 17 cases of meningococcal infections noted during a 1966-67 outbreak in Jacksonville, Florida, found that multiple cases of meningococcal disease tended to occur in crowded families. These findings, however, are not supported by the observations of Cragg and Bennett who in 1959 reported on 25 cases of meningitis in children below the age of 4 years, concluding that meningococcal meningitis occurred equally throughout all classes of the population and that overcrowding and bad housing conditions did not influence its incidence.

Although it has not been possible to determine why this unusual clustering of meningococcal disease occurred, it is not unreasonable to ask if any of these cases could have been prevented. Antimicrobial prophylaxis in meningococcal disease is currently a highly controversial subject. Who should receive prophylaxis; which antimicrobials should be used; whether the short incubation period for meningococcal disease allows for a realistic program of antimicrobial prophylaxis - are a few of the perplexing questions surrounding this subject. It has been recognized for some time that penicillin, though the drug of choice in the treatment of meningococcal disease, is not effective in eradicating the carrier state. Sulfadiazine has been effective in the past in treating the meningococcal carrier. However, in recent years increasing numbers of meningococci are demonstrating resistance to the sulfa drugs. Of the 240 isolates examined by the Center for Disease Control in 1972, 112 (46.7%) were resistant to 1.0 mg% sulfadiazine. The sulfadiazine resistant organisms were primarily group C meningococci which accounted for 107 of the 112 sulfadiazine resistant isolates. Recently Minocycline, a tetracycline analogue and Rifampin, one of the secondary drugs used in the treatment of tuberculosis, have been used effectively to treat meningococcal carriers. Deal and Sanders demonstrated a reduction of the carrier rate by 93.3% with the administration of 600 mg of Rifampin daily for four days. Divine et al using 200 mg doses of Minocycline every 12 hours were able to produce a relative reduction in nasopharyngeal carriers of meningococci of 67.6%. However, over a third of the individuals who received the 200 mg doses of Minocycline experienced minor side effects. These observations demonstrate the importance of antibotic sensitivity testing of all meningococci as well as the need to culture all case contacts before and after a prophylactic program is undertaken.

The fact that the four siblings who developed meningococcemia had their diagnoses made simultaneously may have demonstrated a reluctance on the part of their mother to seek medical attention until she noted desperate illness in one or more members of her household. A more likely explanation would seem to be

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JACKSON										1									
JEFFERSON					4	6	1	1					2		1		1	110	8
JEFFERSON DAVIS																		8	
LAFAYETTE					4										1			33	
LAFOURCHE					1													16	
LASALLE																			
LINCOLN					2													39	1
LIVINGSTON					1												1		1
MADISON																		4	
MOREHOUSE						2												23	3
NATCHITOCHES										1								11	1
ORLEANS	1				10	37	1						27		3		1	649	27
OUACHITA					4	2												90	5
PLAQUEMINES																		2	
POINTE COUPEE																			
RAPIDES						4												88	1
RED RIVER						1													
RICHLAND																		10	1
SABINE																		1	
ST. BERNARD					1	2		1										6	
ST. CHARLES																		1	
ST. HELENA																		4	
ST. JAMES																			
ST. JOHN					1													3	
ST. LANDRY						3									1			22	1
ST. MARTIN						1												3	
ST. MARY	1																	4	1
ST. TAMMANY					4												1	13	
TANGIPAHOA								1										23	1
TENSAS																			
TERREBONNE						2												11	
UNION					1													12	1
VERMILION					2	1												2	
VERNON					4	1						13						90	1
WASHINGTON						1												13	1
WEBSTER																		8	
WEST BATON ROUGE																		6	1
WEST CARROLL																		2	
WEST FELICIANA																		13	
WINN																		12	
OUT OF STATE																			

From January 1 through February 28, the following cases were also reported: 2-Brucellosis; 1-Malaria (contracted outside the U.S.A.)

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that either the children had a common exposure to the meningococcus, perhaps through the mother who had a history of an influenza-like illness one week prior to the onset of symptoms in her children, or that the incubation period of the children's illness was very short, resulting in rapid spread of disease from one child to another. In either case antimicrobial prophylaxis could not reasonably have been employed to prevent disease.

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MMWR, Center for Disease Control, Vol. 22, No. 7

INFLUENZA IN LOUISIANA

To date the State Health Department has received laboratory confirmation of influenza in four individuals. In two instances the A_2/England/42/72 influenza virus was isolated. The virus obtained from the patient discussed in last month's Morbidity Report was one of these. The diagnosis of influenza in 2 additional cases was established by demonstration of rising antibody titers against the A_2 influenza virus.

School absenteeism and Emergency Room visits at Charity Hospital in New Orleans and Conway Memorial in Monroe reached a peak in late January and have been declining since that time. These crude barometers of influenza activity indicate a waning of this year's influenza epidemic.

TYPHOID FEVER IN MIGRANT WORKERS

As of March 7, 67 confirmed cases of typhoid fever occuring in a migrant labor camp in Homestead, Florida have been reported to the Center for Disease Control by the Dade County Health Department. These cases are tentatively felt to be related to a contaminated water supply. Eighty-three additional suspect cases have been hospitalized with compatible disease. Although no strict quarantine measures are presently in force, all evidence indicates minimal movement of workers and families out of the camp at this time. Local authorities are attempting to identify persons leaving the camp and through the CDC will notify the State Health Departments accordingly.

Any undiagnosed febrile illness in a migrant worker or his family should be evaluated for possible typhoid fever with special attention to any history of recent contact with the labor camp in Homestead, Florida. All confirmed cases of typhoid fever should be reported immediately to the Parish Health Unit so that a careful investigation of case contacts may be undertaken without unnecessary delay.