week no. 8 ending February 23, 1985

Texas Preventable Disease NEWS

contents:

BUREAU OF EPIDEMIOLOGY 1100 West 49th Street, Austin, Texas 78756 (512-458-7207)

EXPOSURE OF WOMEN TO CYTOMEGALOVIRUS INFECTIONS IN MEDICAL & EDUCATIONAL FACILITIES

This article is adapted from the California Morbidity Supplement #7 (2/25/83) and the Centers for Disease Control (CDC) publication, Morbidity and Mortality Weekly Report (MMWR), Vol. 34/No. 4/ February 1, 1985.

Public awareness of the transmission of communicable diseases among children in schools or day-care centers has increased significantly during the last few years. Recently, the news media have focused attention on viral infections caused by members of the herpesvirus group. Information so distributed often tends to lose its proper perspective and, therefore, must be addressed by the medical profession to correct the mistaken impressions generated.

Recommendations

1. Women of childbearing age should be informed that cytomegalovirus (CMV) is ubiquitous and that transmission of infection from infants and children in any setting (home or occupation) is best prevented by observance of good personal hygiene and good patient care. Concerned women should be advised that this virus has relatively low infectivity, and, in contrast to rubella and rubeola, close physical contact is necessary to transmit CMV.

2. Although serologic tests are available, routine testing of woman who work with children is not generally recommended at the present time. There are no data to indicate that such a program would reduce the risk of congenitally damaged CMV infants.

3. No infant or child with CMV infection should be excluded from any educational program for which s/he is otherwise eligible. The risk of exposure to such children is relatively small when viewed in the context of the far greater exposure to many healthy children who are unrecognized shedders of CMV. In any child care setting, close attention should be given to personal hygiene such as handwashing after changing diapers or assisting in the bathroom.

Background

Human cytomegalovirus, a member of the herpesvirus group, is common in populations throughout the world. Infection rates vary from 30% to 80% in highly industrialized areas to almost 100% in developing countries. It is known that transmission from person to person requires intimate contact. Such transmission may occur by skin or mucous membrane contact with secretions or excretions of infected persons and can be

transmitted from an infected mother to her child in utero. Among adults, the primary route of transmission is by intimate or very close contact, such as oral or sexual contact. The vast majority of infections are asymptomatic or mild.

As with other members of the herpesvirus group, CMV may be excreted by immune persons when latent virus acquired from a previous infection is reactivated. Reinfection with heterologous strains can also occur.

Congenital Infection

Infection with CMV has particular significance for pregnant women. This virus can infect the fetus coincident with either a primary infection, or reactivation of a latent infection in the mother. The risk of manifest congenital disease at birth appears to be largely associated with a mother's first (or primary) infection during pregnancy. In the US, 0.5% to 2.2% of all newborns are congenitally infected as shown by viral excretion at birth, but the majority of these infected infants show no clinical signs of impairment at delivery. Only 10% of these infections (or about 1 per 1000 births) result in some overt congenital CMV disease at birth. However, some of the asymptomatic congenital infections may produce effects detectable later in life.

Perinatal Infection

From 3% to 28% of all pregnant women may shed CMV from their cervix by the third trimester of pregnancy. The virus has also been detected in the breast milk of 13% of women with CMV antibodies studied in this country. These are major sources of infection for neonates and older infants. Such virus shedding is thought to be predominantly due to the reactivation of latent infection during pregnancy. Infants born to mothers shedding CMV may be infected during and after delivery. The vast majority of these infections are asymptomatic and are not thought to cause any neurologic damage.

Virus Shedding

Although congenital and perinatal CMV infections rarely cause severe disease, the virus can be detected in urine and saliva of these infected infants for several months to several years. At any point in time, 5% to 30% of preschool children in the US can be expected to be excreting CMV.

Risks to Pregnant Women

Exposures to infants with recognized congenital CMV disease represent a very small fraction of the potential exposures to this virus. Women in medical and educational facilities are frequently exposed to unrecognized CMV shedders both in and out of these facilities. There are at least ten asymptomatic congenital infections for every infant born with symptoms of CMV disease. Therefore, the risk posed by children with identified infections is small compared to the risk posed by infants and preschool children with unrecognized (asymptomatic) infections.

Whether women who provide care to any group of infants and children have a greater risk of acquiring a primary infection with CMV than women not so employed has not been established. A few studies have indicated that the rate of CMV seroconversions in women who care for children professionally (nurses, teachers, etc.) is similar to the rate in the general population. Currently, the most practical means by which pregnant women or women planning pregnancy can avoid CMV infection is to practice vigorous personal hygiene prior to and throughout pregnancy, particularly when in close contact with infants and young children.

MONTHLY SUMMARY OF REPORTABLE DISEASES IN TEXAS

Dates of Onset: January 1 to January 26, 1985

REPORTABLE DISEASE	PHR 1	PHR 2/12	PHR 3	PHR 4	PHR 5	PHR 6	PHR 7/10	PHR 8	PHR 9	PHR 11	WEEKS 1 - 4 1984	WEEKS 1 - 4 1985	CUMULATIVE 1984	CUMULATIVE 1985
AIDS										3	20	3	20	3
Amebiasis					5	2				1	12	8	12	8
Botulism			1								1	1	1	1
Brucellosis											3	0	3	0
Campylobacteriosis			4		4	2	2			4	1	16	1	16
Coccidioidomycosis											0	0	0	0
Encephalitis							1		1		9	2	9	2
Hansen's Disease											1	0	1	0
Hepatitis A	18	5	15	4	54	13	2	10	12	10	122	143	122	143
Hepatitis B	2	2	4	4	25	9	2	6	1	6	43	61	43	61
Hepatitis, NA-NB			1		3				1		5	5	5	5
Hepatitis, U	4	5	10	1	36	12	6	16	1	6	46	97	46	97
Histoplasmosis											0	0	0	0
Legionellosis											1	0	1	0
Leptospirosis											1	0	1	0
Malaria					1					3	4	4	4	4
Measles											15	0	15	0
Meningococcal Infections	1	1		1	4	5		1		3	12	16	12	16
Meningitis, Aseptic	1			1	5	4	1	1			9	13	9	13
Meningitis, H. flu	2	4	1	1	5	4	1	3		10	41	31	41	31
Meningitis, Other Bacterial	1				6	1	1			3	15	12	15	12
Mumps		1	1		4	3	3	1	1	4	12	18	12	18
Pertussis											3	0	3	0
Plague											1	0	1	0
Psittacosis											0	0	0	0
Rabies											0	0	0	0
Reye Syndrome								1			1	1	1	1
RMSF											2	0	2	0
Rubella											4	0	4	0
Salmonellosis	1	1	4	3	9	10	4	5	1	13	74	51	74	51
Shigellosis		4	1	2	6	6		14	7	11	35	51	35	51
Tetanus				1							0	1	0	1
Toxic Shock Syndrome											2	0	2	0
Trichinosis											0	0	0	0
Tularemia											0	0	0	0
Typhoid											3	0	3	0
Typhus, Endemic											2	0	2	0
Chickenpox	34	105	4	5	399	120	298	124	48	220	563	1,357	563	1,357
Influenza	609	727		518	2,686	416	398	1,305	1,016	182	7,255	7,857	7,255	7,857
Strep Infections	106	265	5	373	867	303	222	383	158	104	2,028	2,786	2,028	2,786
Scarlet Fever		7	4	5	12	1	9	22		9	0	69	0	69

NOTE: There have been no reported cases of: Anthrax, Cholera, Dengue, Diphtheria, Polio, Q Fever, Relapsing Fever, or Yellow Fever

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TEXAS POPULATION BY PUBLIC HEALTH REGION - 1984*

PHR	POPULATION	PHR	POPULATION	PHR	POPULATION
1	392,206	5	3,566,359	9	1,478,857
2/12	758,209	6	1,491,320	11	3,783,317
3	574,926	7/10	1,584,033		
4	687,431	8	1,462,583	TOTAL	15,779,240

*Texas Department of Health Population Data System

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CUMULATIVE TOTALS FOR DISEASES REPORTED TO THE BUREAU OF COMMUNICABLE DISEASE SERVICES THROUGH JANUARY 1985

REGION	1	2/12	3	4	5	6	7/10	8	9	11	STATEWIDE 1984	STATEWIDE 1985
TUBERCULOSIS	0	0	2	0	6	1	7	1	4	18	42	39
P&S SYPHILIS	1	0	9	2	92	17	45	25	15	54	204	260
GONORRHEA	69	134	255	56	2085	628	495	165	288	1634	3713	5809

PDN Editorial Note:

People are often confused and frightened by viruses that cause congenital malformations or retardation. Congenital CMV syndrome is quite rare, even though CMV is a very common virus. Certainly, women known to be pregnant should not care directly for infants with congenital CMV disease. However, these children should not be excluded from educational programs for which they are otherwise eligible.

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VIRAL ISOLATES FOR JANUARY 1985

VIRUS	COUNTY OF RESIDENCE OF PATIENT(S) (NUMBER OF ISOLATES)
Adenovirus	Harris(2), Travis(3)
Cytomegalovirus	Dallas(3), Harris(15)
Echo(11)	Lubbock(1)
Influenza A(H3N2)	Bexar(1), Burnet(1), Crockett(1), Grayson(3), Harris(96), Lampasas(1), Milam(1), Travis(32)
Rotavirus	Dallas(9), Harris(20), Jefferson(3), Lubbock(7), Tarrant(7), Taylor(1), Travis(1)
Respiratory Syncytial Virus	Bell(3), Dallas(2), Harris(1)
Varicella/Zoster	Bell(1), Dallas(1)

TEXAS PREVENTABLE DISEASE NEWS ( ) is a free, weekly publication of the Texas Department of Health, 1100 West 49th Street, Austin, TX, 78756-3180. Second-class postage paid at Austin, TX. POSTMASTER: Send address changes to TEXAS PREVENTABLE DISEASF NEWS, 1100 West 49th Street, Austin, TX 78756-3180.

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Texas Department of Health
1100 West 49th Street
Austin, TX 78756-3180

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