Texas Preventable Disease NEWS

Vol. 46/No. 5
February 1, 1986

contents:

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BACTERIAL MENINGITIS: SOME QUESTIONS AND ANSWERS FOR PATIENTS*

1. Q. **What is meningitis?**

   A. Meningitis is an infection of the tissue layers covering the brain and spinal cord. There are two basic types of meningitis - aseptic (viral) meningitis and bacterial meningitis. Bacterial meningitis is caused primarily by three organisms - Hemophilus influenzae type B, Neisseria meningitidis, and Streptococcus pneumoniae.

2. Q. **Are meningococcal meningitis and H. influenzae meningitis contagious?**

   A. Yes. However, they are not as contagious as the common cold or the flu.

3. Q. **How is bacterial meningitis spread?**

   A. It is spread by direct contact, as in coughing, sneezing, kissing, and immediate sharing of eating utensils.

4. Q. **Is bacterial meningitis more common at certain times of the year?**

   A. Yes. It is most common during the winter and spring months, but cases can occur at any time of year.

5. Q. **What are the symptoms?**

   A. Meningitis may start like a cold. But this doesn't mean that everyone with a cold has a chance of getting sick with meningitis.

   Symptoms of meningitis may include:

   1. Fever, which may rise suddenly,
   2. Severe and persistent headache and muscle aches,
   3. Stiffness of the neck,
   4. Nausea and perhaps vomiting,
   5. A skin rash composed of small, purplish-red spots.

   Other symptoms may include changes in mental function such as confusion or difficulty in waking up the person, especially a child. The most severe change in mental function is coma.

6. Q. **Who is most likely to get sick with meningococcal meningitis?**

   A. Approximately 25% of normal, healthy people have the meningococcal germs in their noses and throats at some time and remain well. Why some people suddenly become ill with this germ is not understood. Illness is infrequent and unpredictable. When it does occur, two groups of people are known to have a higher chance of getting sick as a result of direct and close contact to the infected case. The first group is **household contacts** who live together under the same roof where there is a case of meningitis.

*Adapted from information prepared by the City of Houston Health Department and the Harris County Health Department.

The second group is preschool-age children in day-care centers where there is a case of meningitis. **Notify the day-care center immediately if your child develops meningitis.**

Generally, children in the same school have no increased risk of getting sick and should just be observed. The same is also true of adults who work together.

In a hospital setting, the only people who have an increased chance of getting bacterial meningitis are those who have direct, face-to-face contact with a case, as in mouth-to-mouth breathing.

7. Q. Who is most likely to get sick with H. influenzae meningitis?

   A. Ninety-one percent of the cases in Texas occur in children under 3 years of age. Cases are rare in individuals over the age of five years. Therefore, the group at greatest risk of infection from a case of H. influenzae meningitis are those children who have had close, direct contact in either a family or day-care situation. **Notify the day-care center immediately if your cild develops meningitis.**

8. Q. How long would it take to become sick after close contact with an infected person?

   A. Most people will get sick in two to ten days; the average is three to four days.

9. Q. What should I do if someone in my household gets symptoms of meningitis?

   A. Do not wait. Seek immediate medical attention for the sick person and remember to ask the doctor about care of household members.

10. Q. Who should receive medicine to keep from getting sick?

    A. Medicine may be prescribed to keep contacts from getting meningitis. Only members of the household and day-care center classmates should receive this medicine. Rifampin is currently recommended as preventive medicine. It will provide protection for three to five days. Although only children are at risk for H. influenzae meningitis, sometimes adults in a household where there is a case have to take rifampin in order to protect any other children under 4 years of age in the family.

11. Q. Who should be vaccinated and why?

    A. Meningococcal vaccine is currently available in either the bivalent A-C or quadrivalent A, C, Y, W-135. It is recommended for outbreaks in closed settings with two or more cases or for travelers to areas experiencing outbreaks (eg, New Delhi). The vaccine is effective only in persons 2 years of age and older. It is not recommended for the general public.

    A vaccine for H. influenzae is now available. It is recommended that children receive it at their second birthday (18 to 23 months for day-care center attendees).

12. Q. Can bacterial meningitis be treated?

    A. Yes. Antibiotics can cure the infection in most cases. Early treatment is important. Meningitis patients, especially infants and children, are usually treated in the hospital.

13. Q. How long will my child be hospitalized?

    A. The length of hospital stay and supportive treatment with medications and intravenous fluids varies from patient to patient. Your doctor can best advise you about how long your child will be hospitalized.

14. Q. **Why are meningitis patients placed in isolation while in the hospital?**

A. Since meningitis is contagious, patients are placed in isolation to decrease the risk of spreading the disease to others.

15. Q. **Are there any lasting effects from meningitis?**

A. Early diagnosis and prompt treatment provide the best chance for complete recovery. However, some neurological problems may persist following a meningitis infection. The extent of such problems depends upon individual health factors and the severity of the disease. Residual effects should be discussed with your doctor.

16. Q. **Are there other general recommendations to avoid this and other infections in my household?**

A. Personal hygiene is very important.

1. Cover your nose and mouth when sneezing or coughing.
2. Wash your hands frequently.
3. Do not allow people to kiss your baby on the mouth.
4. Do not share common eating utensils.
5. Avoid overcrowding.

* * *

SCREENING TESTS FOR HUMAN T-CELL LYMPHOTROPIC VIRUS TYPE III (HTLV-III)

Screening tests for HTLV-III have only recently been licensed and made available commercially. A number of laboratories throughout Texas now provide such screening services or are in the process of instituting these services. To ascertain the general availability of HTLV-III screening tests, including test sites (in-house or by reference laboratories), costs, and turn-around times, a telephone survey was conducted by the TDH Bureau of Epidemiology. The intra- and interstate reference laboratories used by Texas hospitals also were contacted for similar information.

The main tests used in the detection of antibody to HTLV-III are an enzyme-linked immunosorbent assay (EIA) and an assay of antibody to major viral antigens by the Western-blot technique.[1] Immunofluorescence and radioimmunoprecipitation assays are used less frequently for HTLV-III screening. The EIA test was developed for initial screening for HTLV-III antibody. Of the laboratories contacted, the majority routinely do a repeat test on all positives. A few laboratories repeat the test only upon request by a physician. Most laboratories perform the Western blot test to confirm a repeat positive EIA; one laboratory surveyed uses an immunofluorescence test, and another does a battery of tests for immunocompetence.

For the purpose of this survey, blood bank laboratories were included as area laboratories. HTLV-III screening is done in blood banks primarily to insure the safety of the blood supply; however, occasional tests are performed for physicians for diagnostic purposes.

This report was prepared by Susan Czark-Lee, RN, graduate student in Community Health Nursing, University of Texas, Austin.

REFERENCE:

1. CDC. Antibodies to a retrovirus associated with acquired immunodeficiency syndrome (AIDS) in populations with increased incidences of the syndrome. MMWR 1984;33:379-9.

Table 1.
Availability of HTLV-III/LAV antibody testing in Texas.

AREAS SURVEYED (n)	HOSPITAL LAB		INDEP. LAB*				TURNOVER (DAYS)		COST		COMMENTS
			IN TOWN		OUT OF TOWN						
	EIA	WB	EIA	WB	EIA	WB	EIA	WB	EIA	WB**	
Austin (5)	0	0	0	0	5	5	2-5	10-14	$20-40	$75-91	
Corpus Christi (4)	0	0	1	-	3	4	1-3	5-14	29-37	21	Blood bank only.
Abilene (2)	1	0	1	0	-	1	1-2	14	Free-27	35-38	Most tests done on donated blood (free); occasionally use as diagnostic tool.
Houston (7)	4	1	1	1	1	4	1-10	≈14	Free-40	35-60	Most tests done on donated blood (free); occasionally use as diagnostic tool. One site uses immuno-fluorescence ($150) as confirmatory test.
Lubbock (3)	0	0	3	0	-	3	1-2	7-14	6-35	60	
San Antonio (5)	1	1	3	1	1	2	1-2	10-14	18-31	40-70	
Dallas (4)	1	0	2	0	3	4	1-7	7-14	20-26	41-60	

*Includes laboratories in hospital and non-hospital blood banks.
**Some substantially lower rates for Western blot (WB) if done in volume.

NOVEMBER 1985

TEXAS PREVENTABLE DISEASE NEWS (ISSN 8750-9474) 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 DISEASE NEWS, 1100 West 49th Street, Austin, TX 78756-3180.

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