

Brucellosis: Congenital Transmission in Galveston

In March 1995 blood cultures drawn from an infant in the neonatal intensive care unit at a hospital in Galveston were positive for *Brucella melitensis*. The infant's mother had also had blood cultures positive for *Brucella melitensis* in January 1995. Congenital transmission of *Brucella* is extremely uncommon; indeed, this is the first reported occurrence of congenital brucellosis in the United States.

The mother was a 17-year-old citizen of Mexico, who became pregnant in August 1994. She moved to Port Arthur (Jefferson County) in December. When she went for a routine prenatal check to the UTMB clinic in Port Arthur on January 11, she was doing well. However, on January 16, she presented to the clinic complaining of post-coital bleeding. She was transferred to UTMB-Galveston for observation, where initial examination revealed a closed cervix and normal fetal heart tones. The fetus was at 21 weeks gestational age by ultrasound examination. The next morning, the mother began to have contractions and was given a tocolytic agent. On the morning of January 19 she had a low-grade fever. Blood cultures were drawn to rule out chorioamnionitis and antibiotic treatment was initiated. However, she continued to have contractions and delivered a 650 gram baby girl later that morning by spontaneous vaginal delivery. The blood cultures were negative at 48 hours, and she was discharged the morning of January 22.

That night, however, the cultures grew gram negative coccobacilli, which were identified as *Brucella* sp. on January 25. Later at the Texas Department of Health laboratory, the isolate was shown to be *Brucella melitensis*.

The infant's blood cultures at birth were negative. Because her birth was extremely premature, she was intubated and placed on mechanical ventilation soon after birth.

Despite multiple medical problems, she slowly improved during the month of February. However, on March 4 she became lethargic and had an episode of apnea. Blood cultures were drawn for presumed sepsis. *Brucella* sp. was identified from the cultures on March 14 and later identified as *Brucella melitensis* at the TDH Laboratory. She was treated with gentamicin and trimethoprim-sulfamethoxazole and recovered. As of September 7, 1995 she weighed 5,100 grams and showed normal development.

The mother grew up on a small farm in central Mexico. While on the farm, she often drank unpasteurized cow milk, but she did not drink goat milk or eat goat milk cheese. When she became pregnant in August 1994, she moved to a small village near the farm to be with relatives. The relatives often bought unpasteurized goat cheese from local vendors and the mother ate it occasionally. After moving to Port Arthur in December, she no longer ate unpasteurized products.

In recent years, the epidemiology of brucellosis in Texas has shifted; most cases are now associated with consumption of unpasteurized goat cheese. This is likely the mechanism through which the mother acquired brucellosis. While it is unproven that infection with *Brucella* induces abortion in humans as it does in cattle, any gram negative bacteremia would be expected to increase the risk of premature birth. The mother was bacteremic during delivery of the infant and very likely passed the infection to her child

Continued ☞

Also in this issue:

- Seventh Hantavirus Patient in Texas Survives
- Arboviral Activity in Texas
- Bimonthly Statistical Summary
- Vaccine Preventable Disease Update

during birth. The infant became septic 6 weeks after birth, which is within the 1 to 2 month incubation period of Brucellosis.

This episode may be a sentinel event. As intensive care becomes more and more sophisticated, and younger and younger premature infants are able to

survive (who might otherwise have been classified as a "spontaneous abortion"), brucellosis may emerge as an etiology of prematurity in humans.



Prepared by Ben Barnett, MD, currently with Grady Hospital, Atlanta, Georgia.

Seventh Hantavirus Patient in Texas Survives



On August 20 a 54-year-old African American railroad worker from Beaumont was examined at a local hospital emergency department for dyspnea, tachypnea, and fever. The patient interview disclosed that he had a history of chronic obstructive pulmonary disease, but usually no problem with shortness of breath. He received a prescription for amoxicillin and for albuterol nebulizer treatments; and he was sent home. When he returned to the hospital the next day with a nonproductive cough and a significant increase in shortness of breath, he was placed in intensive care and intubated. Laboratory tests revealed the following arterial blood gas values (on room air): pH 7.362, partial carbon dioxide 41, partial oxygen 53, bicarbonate 22.6, and oxygen saturation 88.6%. His white blood cell count was 47.6 per cubic millimeter, platelet count was 65,000/cu mm, and hematocrit level was 47.6%.

On August 30 Texas Department of Health Laboratory identified the causative agent as hantavirus. On September 1 the patient was extubated and transferred to a general nursing unit. He was discharged on September 9. Local and regional health department staff have interviewed the patient to determine possible means of exposure. The TDH Zoonosis Division will use this information to plan its sample collection activities. Laboratory testing will continue at TDH and at the Centers for Disease Control and Prevention to confirm that the Bayou virus strain was responsible for this latest HPS case.

Arboviral Activity in Texas

Some arbovirus infections can cause severe illness, with case-fatality rates of 50% to 75%. State law requires that health professionals report all cases of encephalitis and dengue fever to the Texas Department of Health (TDH). For use in planning appropriate preventive action, local health departments also conduct targeted surveillance of infection in mosquitoes, chickens, and wild birds. No cases of illness were reported for August; local and regional surveillance disclosed the following vector and sentinel activity.

Endemic Arboviral Activity: by Region*, August 1996

Region	Eastern	St Louis	Western	Dengue
1				
6				

For further information contact Julie Rawlings of the TDH Infectious Disease Epidemiology and Surveillance Division at (512) 458-7676, Mary D'Anton of the TDH Microbiological Services Division at (512) 458-7595, or Jane Mahlow of the TDH Zoonosis Control Program at (512) 458-7255.

* Regions not listed had no arboviral activity. For regional boundaries, see map on page 3.

Jul/Aug 1996

Bimonthly Statistical Summary of Selected Reportable Diseases

Selected Diseases/Conditions	HHSC Region											Selected Texas Counties								This Period		Cumulative[1]	
	1	2	3	4	5	6	7	8	9	10	11	Bexar	Dallas	El Paso	Harris	Hidalgo	Nueces	Tarrant	Travis	1995	1996	1995	1996
Sexually Transmitted Diseases[2]																							
Syphilis, primary and secondary	1	1	51	19	9	31	12	4	4	0	3	3	30	0	28	1	1	17	6	270	135	991	612
Congenital Syphilis	0	0	1	0	1	21	0	0	0	0	0	0	0	0	19	0	0	0	0	9	23	97	120
Resistant Neisseria gonorrhoeae	3	0	1	0	0	1	1	3	0	0	1	1	1	0	1	0	1	0	0	38	10	139	49
Enteric Diseases																							
Salmonellosis	35	13	24	16	9	14	32	22	11	67	31	3	5	67	5	7	13	4	9	560	274	1327	1151
Shigellosis	7	4	25	6	4	12	28	14	10	3	47	2	4	3	6	12	24	16	16	700	160	1633	1011
Hepatitis A	12	5	44	11	2	19	16	20	11	11	53	5	24	11	10	23	9	14	13	607	204	2087	1730
Campylobacteriosis	19	2	10	2	10	11	11	7	2	7	7	1	5	7	5	1	3	1	7	220	88	719	466
Bacterial Infections																							
H. influenzae, invasive	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Meningococcal, invasive	0	0	6	3	0	0	5	0	0	0	0	0	3	0	0	0	0	1	2	22	14	187	169
Lyme disease	0	0	32	1	0	0	0	0	0	0	0	0	2	0	0	0	0	22	0	13	33	62	49
Vibrio species	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8	1	18	2
Other Conditions																							
AIDS[4]	6	15	218	18	19	358	61	557	5	12	22	52	132	12	327	1	10	52	15	698	846	3285	3255
Hepatitis B	3	5	12	2	6	11	3	0	4	1	5	0	6	1	5	0	3	3	2	218	52	867	672
Adult elevated blood lead levels	0	1	25	0	4	1	0	39	0	0	0	39	22	0	0	0	0	1	0	52	70	338	253
Animal rabies - total	0	12	3	0	1	4	11	6	4	0	1	1	2	0	1	0	0	0	3	52	44	52	44
Animal rabies - dogs and cats	0	3	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1	71	22	71	22
Tuberculosis Disease[2]																							
Children (0-14 years)	1	0	5	0	0	9	0	3	0	1	6	2	0	1	5	4	1	4	1	33	25	119	101
Adults (>14 years)	5	3	46	5	4	138	19	17	6	11	26	14	21	11	108	6	7	18	10	384	280	1356	1220
Injuries[2]																							
Spinal Cord Injuries	0	0	15	5	0	0	0	0	0	0	0	0	0	0	1	0	0	9	0	87	20	235	172

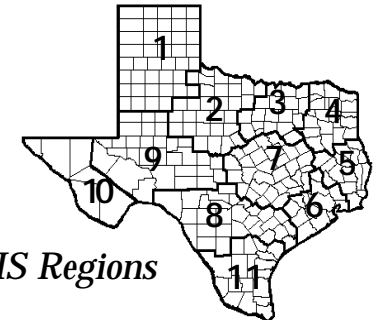
1. Cumulative to this month. 2. Data for the STD's, Tuberculosis, and spinal cord injuries are provided by date of report, rather than date of onset. 3. Voluntary reporting. 4. AIDS totals include reported cases from Texas Department of Corrections, which are not included in the regional and county totals. * Data unavailable.

Call 1-800-705-8868 to report

1994 POPULATION ESTIMATES

HHSC REGIONS					
1	751,822	4	931,379	7	1,844,240
2	530,445	5	680,001	8	1,919,939
3	4,724,463	6	4,184,163	9	537,820
STATEWIDE TOTAL 18,286,827					

SELECTED TEXAS COUNTIES			
Bexar	1,268,744	Hidalgo	442,346
Dallas	1,987,680	Nueces	306,499
El Paso	658,498	Tarrant	1,314,613
Harris	3,004,010	Travis	605,804



DHHS Regions



Disease Prevention News (ISSN 1068-7920) is a free, biweekly publication of the Texas Department of Health, Public Health Professional Education, 1100 West 49th Street, Austin, TX 78756-3199, (512) 458-7677. Periodical postage paid at Austin, TX. <http://www.tdh.state.tx.us/dpnhome.htm>
 TDH Healthy Texans BBS: (800) 858-5833

Disease Prevention News
 Texas Department of Health
 1100 West 49th Street
 Austin, TX 78756-3199

**Periodical Postage
 Paid at Austin, TX**

Return Postage Guaranteed

POSTMASTER: Send address changes to *Disease Prevention News*, 1100 West 49th Street, Austin, TX 78756-3199.

Walter D. Wilkerson, Jr., MD
 Chair, Texas Board of Health

David R. Smith, MD
 Commissioner of Health

Diane Simpson, PhD, MD
 State Epidemiologist, Associate Commissioner for
 Disease Control and Prevention

Michael Kelley, MD, MPH
 Chief, Bureau of Communicable Disease Control

Kate Hendricks, MD, MPH&TM
 Medical Editor

Mark Gregg, MA
 Director, Public Health Professional Education

Susan Hammack, MEd
 Managing Editor

Susan Hurst
 Production Assistant

Vaccine Preventable Disease Update Confirmed cases with onset from 7/1/96-8/31/96

Condition	County	Number of Cases	Date of Onset	Condition	County	Number of Cases	Date of Onset
Measles	Harris	2	7/4	Mumps	Travis	1	8/3
		1	7/6		Kaufman	1	8/14
	Montgomery	1	7/10		Ector	1	8/20
	Harris	1	7/11		Bexar	1	8/22
		1	7/12				
	1	7/13	Pertussis		Galveston	1	7/1
	Liberty	1			7/16	Panola	1
	Montgomery	1	7/20		Brazos	1	7/8
	Galveston	1	7/22		Harris	1	7/10
	Harris	1	7/25			1	7/11
	Montgomery	1	7/30		Bexar	1	7/25
	Harris	1	8/1		Shelby	1	7/30
		1	8/7		Denton	1	7/30
	Trinity	1	8/20		Ector	1	7/31
Harris	1	8/20	Hidalgo	1	8/5		
Mumps	Dallas	1	7/31	Rubella	Harris	1	7/15
YTD		Measles	Mumps	Pertussis	Rubella		
		27	23	80	7		