

LISTERIOSIS, NONPERINATAL

CRUDE DATA	
Number of Cases	21
Annual Incidence ^a	
LA County	0.23
United States	N/A
Age at Onset	
Mean	65 yrs
Median	70
Range	15-85
Case Fatality	
LA County	10%
United States	N/A

^aCases per 100,000 population.
N/A - not available.

ETIOLOGY

Listeria monocytogenes, a gram-positive bacterium.

DISEASE ABSTRACT

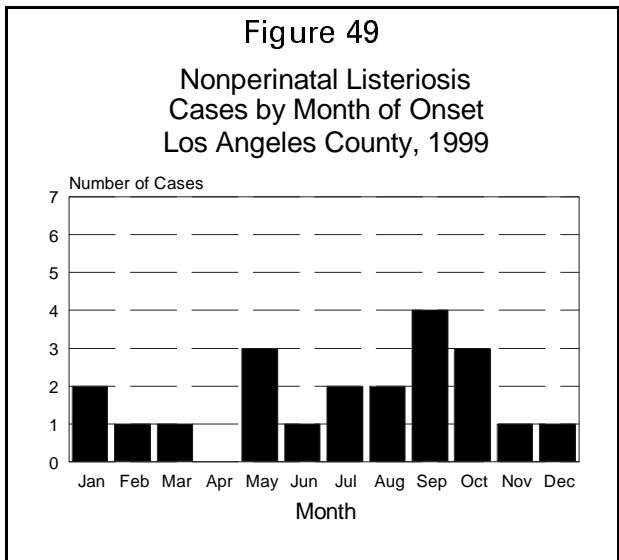
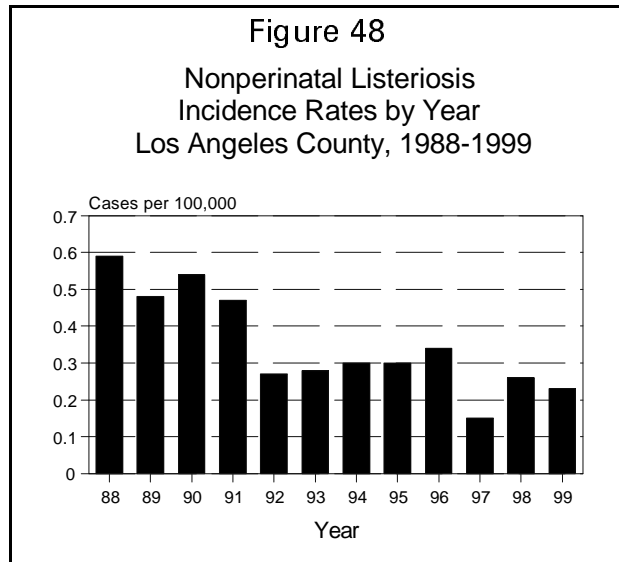
Nonperinatal listeriosis usually presents as meningoencephalitis and/or septicemia. It affects elderly and immunocompromised persons, such as those afflicted with cancer or HIV, and those on immunosuppressive therapy.

STRATIFIED DATA

Trends: With 0.23 cases per 100,000 population, the nonperinatal listeriosis rate in 1999 is slightly lower than the 1998 rate (Figure 48).

Seasonality: Consistent with prior years, more reported cases occurred in summer than in any other season (Figure 49).

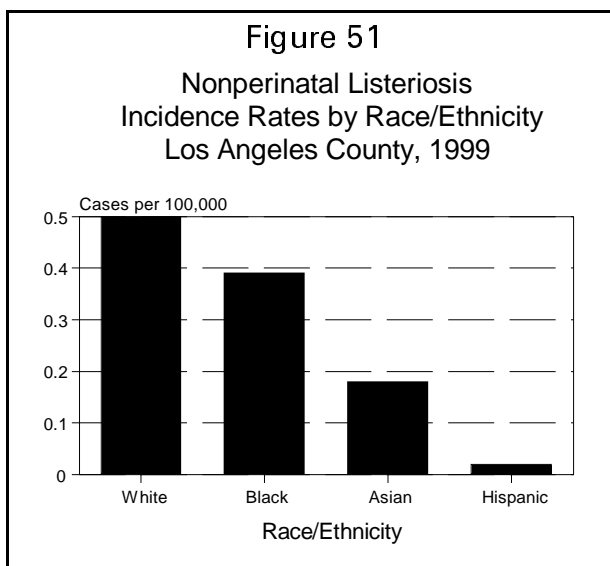
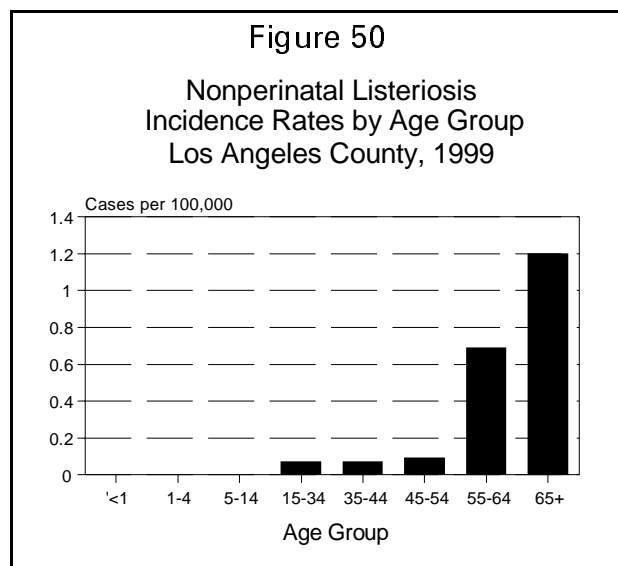
Age: Fifty-seven percent of cases were older than 65 years resulting by far in the highest age-specific rate for nonperinatal listeriosis (1.20 per 100,000 population). In 1999, the 55-64 year-olds experienced a substantial increase compared to the previous year (0.69 in 1999 versus 0.16 in 1998; Figure 50).



Sex: The male-to-female rate ratio was 1.6:1.

Race/Ethnicity: In 1999, Whites again had the highest incidence rate of nonperinatal listeriosis (0.50 per 100,000 population). Blacks had the second highest rate (0.39 per 100,000), followed by Asians (0.18 per 100,000) and Hispanics (0.02 per 100,000) (Figure 51). Reasons for this large disparity are unknown.

Location: West Health District had the highest rate (0.69 per 100,000), followed by Hollywood-Wilshire (0.59 per 100,000) and Bellflower (0.56 per 100,000).



Predisposing Conditions and Medical Risk Factors: Twelve (57%) of 21 cases were older than 65 years of age, eight (38%) were taking steroids prior to the onset of listeriosis, six (29%) suffered from renal failure or were treated with antibiotics prior to onset, five (24%) had diabetes, and four (19%) were diagnosed with cancer (Table 3). Only one person (5%) had no identified risk factor other than chronic obstructive pulmonary disease, but he was not being treated with steroids.

Outcome: Two (10%) of 21 cases in 1999 died.

Culture Sites: *Listeria monocytogenes* was isolated from blood (15), cerebrospinal fluid (3), and once from brain tissue, an arm graft, and an abscess.

COMMENTS

Overall, incidence of nonperinatal listeriosis was stable. Case-fatality, however declined to an all-time low of 10%. By comparison, in 1986, 41% of nonperinatal cases died. This decline was unlikely due to changes in antibiotic therapy, which remained the same in the last 15 years, but may be attributed to improved symptomatic therapy, or earlier recognition which facilitated earlier antibiotic therapy.

Table 3. Predisposing Factors in Cases of Nonperinatal Listeriosis, Los Angeles County, 1999

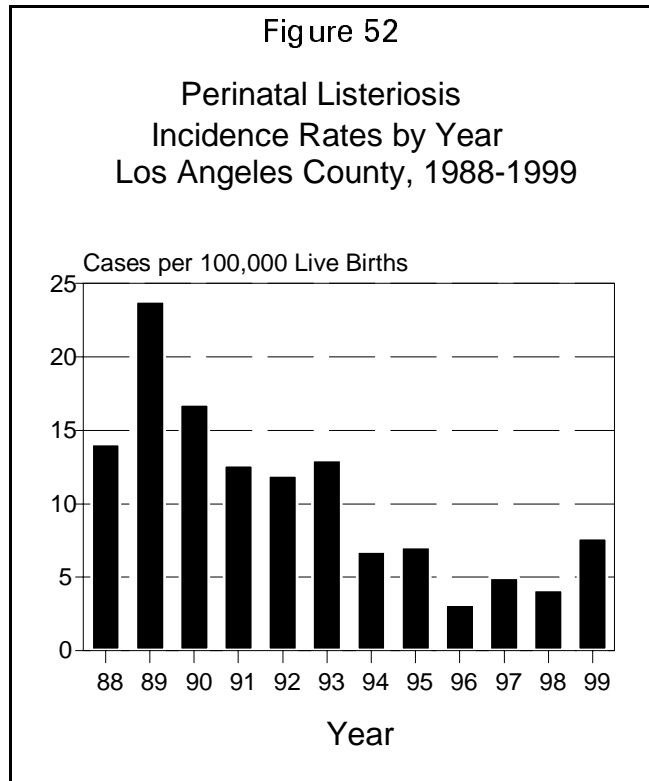
Medical Condition^a	Number(N=21)	Percent
Age > 65 years	12	57
Steroid use	8	38
Kidney disease	6	29
Prior antibiotic use	6	29
Diabetes	5	24
Cancer	4	19
No identified risk factors	1	5

^aEach case may have more than one underlying medical risk factor.

LISTERIOSIS, PERINATAL

CRUDE DATA	
Number of Cases	12
Annual Incidence ^a	
LA County	7.7
United States	N/A
Age at Onset	
(Maternal)	
Mean	29 yrs
Median	29
Range	19-39
(Infant Gestational)	
Mean	25 wks
Median	26
Range	14-33
Case Fatality	
LA County	33%
United States	N/A

^aCases per 100,000 live births



ETIOLOGY

Listeria monocytogenes is a gram-positive bacterium.

DISEASE ABSTRACT

A perinatal listeriosis case is defined as a pregnant woman, her fetus or a neonate with infection of a sterile site with *Listeria monocytogenes*. Neonatal listeriosis is divided into early onset (0-6 days after birth) and late onset (more than 6 days to 42 days after birth). The fetus may be stillborn, born with septicemia, or develop meningitis in the neonatal period, even if the mother is asymptomatic.

STRATIFIED DATA

Trends: The 1999 perinatal listeriosis incidence rate (7.7 per 100,000 live births) has almost doubled since last year. Now, the incidence of listeriosis is similar to that in 1994/1995 (Figure 52).

Seasonality: There were too few cases to look for seasonality.

Age: Women older than 35 years (9.9 per 100,000 live births) and those less than 20 years old (8.9 per 100,000 live births; Figure 53) showed the highest rates.

Sex: Information on eight live-born infants showed that five were male and three were female.

Race/Ethnicity: Among all races, Asians had the highest disease rate (30.5 per 100,000 live births). Rates among Blacks (7.1 per 100,000 live births), Whites (6.8 per 100,000 live births) and Hispanic (6.2 per 100,000 live births) mothers followed (Figure 54).

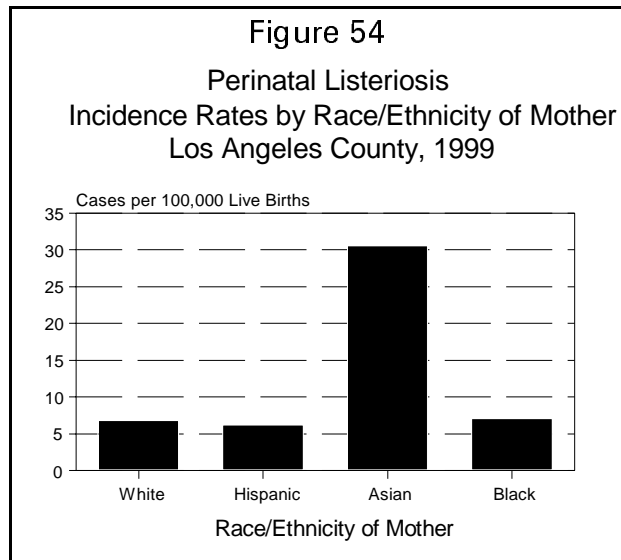
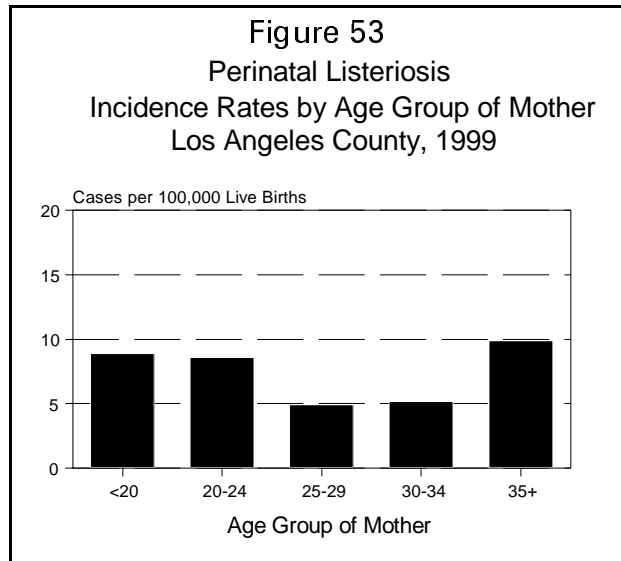
Location: Three perinatal cases came from the Central and Foothill Health District, two from San Antonia Health District, the remaining four each from different health districts.

Type of Delivery: In six perinatal cases where the method of delivery was known, four were vaginal and two were delivered by Caesarian section.

Outcome: Two fetuses were aborted, one fetus was stillborn, eight were born alive and one infant died after delivery. One had an unknown outcome.

Culture Sites: Sites of *Listeria monocytogenes* isolation were blood (n=7; 64% for both mother and infant/fetus), placenta (n=4; 36% in mother and child) and two from the trachea (18% in infant; Table 4).

Onset: In 1999, all cases were classified as early-onset.



COMMENTS

Perinatal listeriosis has increased compared to 1998. However, the overall incidence remains low. In this range of small numbers an increase could be attributable to many factors, such as the alertness of physicians, better reporting, or just random variation. Incidence by race has shifted. Asian mothers now have the highest incidence whereas White mothers had the highest incidence in 1998. Although this merits closer scrutiny in the future, Asians represent only three cases.

All strains of *Listeria monocytogenes* are now typed by pulsed field gel electrophoresis (PFGE). In 1999, we observed several “molecular clusters” which had identical PFGE patterns, but did not seem to be epidemiologically related. The value of PFGE was demonstrated through the discovery that one perinatal listeriosis case had the same strain as a recalled food product from the East coast. Further investigation revealed that the patient in fact had recently eaten the implicated product.

PREVENTION

Listeria monocytogenes is found in soil and water. Animals can carry *Listeria* without appearing ill, which can result in contaminated foods of animal origin, such as meats and dairy products. In particular, studies have implicated unpasteurized milk or products made from unpasteurized milk, such as soft cheeses (Mexican-style, Brie, Feta), cold cuts from deli counters, undercooked meat, e.g. chicken, paté, and pork tongue in jelly; these foods should be avoided by pregnant women. Fruits and vegetables should be thoroughly washed. In particular, cheese sold by street vendors or obtained from relatives/friends in other countries where food processing quality assurance is unknown should be avoided by pregnant women.

Table 4: Frequency (%)^a of *Listeria monocytogenes* Isolates from Mothers and Infants, Los Angeles County, 1999

Culture Site	Mother (n=11)		Infant (n=6)	
	Number	Percent	Number	Percent
Blood	7	64	4	67
Placenta	2	18	2	33
Amniotic fluid	2	18	N/A	

^a Percentages may exceed 100% as cultures were obtained from more than one site in some cases.