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YEAR BOOK OF PEDIATRICS® 1990

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Year Book Medical Publishers subscribes to and surveys nearly 850 U.S. and foreign medical and allied health journals. From these journals, the Editors select the articles to be abstracted. Journals represented in this YEAR BOOK are listed below.

Acta Paediatrica Scandinavica
Adolescent and Pediatric Gynecology
American Journal of Cardiology
American Journal of Clinical Nutrition
American Journal of Diseases of Children
American Journal of Epidemiology
American Journal of Obstetrics and Gynecology
American Journal of Ophthalmology
American Journal of Pediatric Hematology/Oncology
American Journal of Public Health
American Surgeon
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Annals of Ophthalmology
Annals of Surgery
Archives of Dermatology
Archives of Disease in Childhood
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British Journal of Urology
British Medical Journal
Cancer
Cancer Research
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Clinical Nuclear Medicine
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Italian Journal of Neurological Sciences
Journal of Adolescent Health Care
Journal of Allergy and Clinical Immunology
Journal of Bone and Joint Surgery (British volume)
Journal of Child Neurology
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Journal of Dentistry for Children
Journal of Developmental and Behavioral Pediatrics
Journal of Hand Surgery (American)
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Journal of Pediatric Ophthalmology and Strabismus
Journal of Pediatric Orthopedics
Journal of Pediatric Surgery
Journal of Pediatrics
Journal of Perinatology
Journal of Rheumatology
Journal of the American Academy of Child and Adolescent Psychiatry
Journal of the American Academy of Dermatology
Journal of the American College of Cardiology
Journal of the American Dental Association
Journal of the American Medical Association
Journal of Thoracic and Cardiovascular Surgery
Journal of Trauma
Journal of Urology
Kidney International
Lancet
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New England Journal of Medicine
Obstetrics and Gynecology
Paediatric and Perinatal Epidemiology
Pediatric Cardiology
Pediatric Emergency Care
Pediatric Infectious Disease Journal
Pediatric Neurology
Pediatric Neuroscience
Pediatric Pulmonary
Pediatrics
Plastic and Reconstructive Surgery
Prenatal Diagnosis
Proceedings of the National Academy of Sciences
Psychiatry Research
Public Health Reports
Scandinavian Journal of Infectious Diseases
Scandinavian Journal of Primary Health Care
Science
Southern Medical Journal
Spine
Surgery
Transfusion
Western Journal of Medicine

Introduction

Until I sat down to write this introduction, an introduction which usually goes unread, I didn't appreciate how much happened last year and how much of it is contained in the 1990 YEAR BOOK. As we all know, society and society's problems always touch upon pediatrics, and this is reflected by the inclusion of studies in this edition about the frequency of mother to infant transmission of the acquired immunodeficiency virus, the consequences of maternal cocaine use on the fetus, and even the consequences of cocaine use on the nose of the adolescent. A report of American and Soviet teenagers' concerns about nuclear war and the future reflect the current state of society, as does an entry entitled, "Are Condom Instructions Readable?". Infections and day-care, common concerns of many of you, also are discussed.

If the challenges of society don't interest you, how about some of the new diseases and new therapies of both old and new diseases? For example, this edition of the YEAR BOOK describes the loose anagen syndrome—a problem you are certain to encounter—as well as a report on the pestivirus, the most recently recognized common cause of infantile diarrhea, and further reports on human parvovirus B 19 infections during pregnancy and their relationship to nonimmune hydrops fetalis.

Reports on lung transplantation for cystic fibrosis, infant orthotopic cardiac transplantation, the stimulation of myelopoiesis in patients with aplastic anemia by recombinant human granulocyte-macrophage colony-stimulating factor, the use of subcutaneous recombinant human erythropoietin in children undergoing continuous peritoneal dialysis, immunosuppression with azathioprine, the use of prednisone in the treatment of recent-onset insulin-dependent diabetes mellitus, and the treatment of children with port-wine stains using the flashlamp-pulsed tunable dye laser are all contained in these pages and should keep you current of the new forms of experimental therapy that are starting to become norms of everyday treatment.

Learn about the closed eye sign as an aid to diagnosing nonspecific abdominal pain, a simple exercise test in assessment of asthma, and how the duration of fever before onset of a febrile seizure helps to predict the presence of significant illness.

Do you know about the relationship between food hypersensitivity and atopic dermatitis? The link between infant feeding and childhood cancer? Tennis elbow in breast-feeding mothers? The bulging fontanelle and DPT immunization? The perineal eruption of Kawasaki disease? Or the role of dexamethasone in the treatment of bacterial meningitis?

Please spend some time with the 1990 YEAR BOOK and you will learn the answers to these questions and much more. Yes, many things happened last year, things you should know about.

It has been said that, "The sooner you fall behind, the more time you have to catch up." Now is the time to catch up.

Frank A. Oski, M.D.

Table of Contents

The material in this volume represents literature reviewed through April 1989.

1 The Newborn

Effects of Maternal Marijuana and Cocaine Use on Fetal Growth

Zuckerman B, Frank DA, Hingson R, Amaro H, Levenson SM, Kayne H, Parker S, Vinci R, Aboagye K, Fried LE, Cabral H, Timperi R, Bauchner H (Boston City Hosp; Boston Univ)

N Engl J Med 320:762–768, March 23, 1989 1–1

The widespread use of marijuana and cocaine during prime reproductive years raises questions about the effects of this substance on fetal growth and development. The few studies on this topic have yielded inconsistent results. Investigations of 1,226 mothers, recruited from a general prenatal clinic, indicated that 27% had used marijuana during pregnancy and 18% had used cocaine. On the basis of positive urine assays alone, 16% and 9% had used marijuana and cocaine, respectively.

When potentially confounding variables were controlled for, the infants of mothers who had positive urine assays for marijuana were 79 gm lighter in birth weight and 0.5 cm shorter than the infants of mothers who had not used marijuana during pregnancy. Infants of mothers who had used cocaine during pregnancy were 93 gm lighter and 0.7 cm shorter than those whose mothers had not used cocaine during pregnancy. In addition, infants of cocaine users had a 0.43 cm smaller head circumference than infants of nonusers. When the analysis was repeated using only self-reported use of marijuana and cocaine, no significant associations between such use and any measures of outcome were found.

The use of marijuana or cocaine during pregnancy appears to be associated with impaired fetal growth. Measuring a biologic marker of such use, rather than relying on self-reports, is important in demonstrating this association.

▶ This problem is one of the major challenges in our society at present time. What a shame that we have to devote so much time and money to treat the ravages of this condition when the same energy and resources could be invested in improving the lot of the less fortunate members of society. For more on cocaine abuse and its fetal consequences please refer to Abstract 7–1 and the accompanying commentary. In addition to the observations of Zuckerman and associates described above, Little and colleagues from Dallas report that infants born to cocaine abusers had significantly more complications at birth such as meconium and tachycardia, lower birth weight, and an excess of congenital cardiac anomalies (1). Chouteau and co-workers, in a retrospective study from New York City, found cocaine abuse to be a significant predictor of low birth weight and early gestational age at delivery (2). Further, Telsey et al (3) report the unusual occurrence of a term infant exposed to cocaine antena-

tally who was found to have necrotizing enterocolitis at birth. Where, and when, will it all end?—F.A. Oski, M.D.

References

1. Little BB, et al: *Obstet Gynecol* 73:157, 1989.
2. Chouteau M, et al: *Obstet Gynecol* 72:351, 1988.
3. Telsey AM, et al: *Clin Pediatr* 27:547, 1988.

Association of *Ureaplasma urealyticum* Infection of the Lower Respiratory Tract With Chronic Lung Disease and Death in Very-Low-Birth-Weight Infants

Cassell GH, Waites KB, Crouse DT, Rudd PT, Canupp KC, Stagno S, Cutter GR (Univ of Alabama, Birmingham; Univ of Cambridge, England)

Lancet 2:240–245, July 30, 1988 1–2

Very-low-birth-weight infants are more likely to die of respiratory-related problems within the first few days of life, and those who survive are at increased risk of chronic lung disease. However, the true incidence of lower respiratory tract infection and its contribution to death or development of chronic lung disease are unknown. Endotracheal aspirates were cultured within 24 hours of birth from 200 infants who weighed no more than 2,500 gm and had evidence of respiratory disease. Aspirates were cultured for mycoplasmas, chlamydiae, viruses, and bacteria.

TABLE 1.—Microorganisms Isolated From Tracheal Aspirates Within 24 Hours After Birth In Infants Weighing 2,500 GM or Less

Microorganism	Incidence (%)
None	*126/200 (63)*
Any microorganism	74/200 (37)
Mycoplasmas	54/200 (27)
Ureaplasma urealyticum	34/200 (17)*
Mycoplasma hominis	20/200 (10)†
Other bacteria	20/186 (11)‡
Streptococcus agalactae	7/186 (4)
Staphylococcus epidermidis	7/186 (4)
Streptococcus viridans	1/186 (2)
Propionobacterium acne	3/186 (2)
Enterococcus	2/186 (1)
Pseudmonas sp	1/186 (1)
Staphylococcus hemolyticus	1/186 (1)
Enterobacter cloacae	1/186 (1)

*In 5 instances *Ureaplasma urealyticum* was isolated with other organisms: 2 *Streptococcus agalactae*, 1 *Mycoplasma hominis*, 1 *Staphylococcus aureus*, and 1 *Streptococcus viridans*.

†In 5 instances *M. hominis* was isolated with other organisms: 1 *Staphylococcus epidermidis*, 1 peptostreptococcus, 1 *S. viridans*, 1 *Escherichia coli* plus *S. viridans*, and 1 cytomegalovirus.

‡In 3 instances "other" bacteria were isolated with 1 or more other bacterial species.

(Courtesy of Cassell GH, Waites KB, Crouse DT, et al: *Lancet* 2:240–245, July 30, 1988.)

TABLE 2.—Hospital Deaths and Chronic Lung Disease Among Infants Weighing 2,500 gm or Less Whose Tracheal Aspirate Was Cultured Within 24 Hours of Birth

Microorganism	Proportion who died (%)	Proportion with chronic lung disease (%)
None	26/126 (20)	21/102 (21)*
Any microorganism	22/74 (30)	17/58 (29)
U urealyticum	15/34 (44)	9/24 (38)
M hominis	4/20 (20)	3/16 (19)
Other bacteria	3/20 (15)	5/18 (28)

*Chronic lung disease was defined as requiring supplementary oxygen for 28 days or more after birth. Infants who died before day 28 were excluded from this analysis. Thus the denominator in each case represents only those at risk of chronic lung disease.

(Courtesy of Cassell GH, Waites KB, Crouse DT, et al: *Lancet* 2:240–245, July 30, 1988.)

The most commonly isolated organism was *Ureaplasma urealyticum* (Table 1). This organism is not seen on Gram stain and is not recovered on routine bacteriologic media. Further, it is not susceptible to antibiotics commonly used to treat neonatal infection. Fourteen percent of isolates were obtained from infants born by cesarean section with intact membranes, indicating that the infection was incurred in utero.

Among all infants weighing no more than 2,500 gm there was no significant difference in the hospital death rate whether or not respiratory infection was present (Table 2). All infants weighing no more than 1,000 gm were more likely the die than were larger infants, and those who had *U. urealyticum* infections of the lower respiratory tract were twice as likely to die or to have chronic lung disease than were uninfected infants of the same birth weight (Tables 3 and 4). In Table 5 the characteristics of infants with culture-positive and culture-negative tracheal aspirates are compared.

The findings do not establish *U. urealyticum* as a cause of death or chronic lung disease. However, the organism is probably one of several factors predisposing to the development of chronic lung disease in very-

TABLE 3.—Hospital Deaths Among High-Risk Infants in Relation to Presence of *Ureaplasma urealyticum* in Tracheal Aspirate Within 24 Hours of Birth

Birth-weight	Proportion of deaths (%)	
	Culture negative*	Ureaplasma positive†
≤1000 g	19/56 (34)	14/20 (70)†
>1000 g	7/70 (10)	1/14 (7)

*Includes only those infants whose tracheal aspirates were culture negative for all microorganisms.

†Includes those infants whose tracheal aspirates were culture positive only for *U. urealyticum*.

(Courtesy of Cassell GH, Waites KB, Crouse DT, et al: *Lancet* 2:240–245, July 30, 1988.)

TABLE 4.—Proportion With Chronic Lung Disease Accordisng to Results of Culture of Tracheal Aspirate for *Ureaplasma urealyticum* Within 24 Hours of Birth*

Birthweight	Culturally negative†	Ureaplasma positive‡
≤1000 g	15/37 *(41%)*	9/11 *(82%)*§
>1000 g	6/64 *(9%)*	0/13

*Chronic lung disease was defined as requiring supplementary oxygen for 28 days or more after birth. Infants who died before day 28 were excluded from analysis, thus the denominator in each case represents only those at risk for chronic lung disease.

†Includes only those infants whose tracheal aspirates were culturally negative for all microorganisms.

‡Includes those infants whose tracheal aspirates were culturally positive only for *U. urealyticum*.

§Different from culturally negative, $P < .02$.

(Courtesy of Cassell GH, Waites KB, Crouse DT, et al: *Lancet* 2:240–245, July 30, 1988.

TABLE 5.—Characteristics of Infants Weighing 1,000 Gm or Less According to Whether Tracheal Aspirate Was Culture Positive or Culture Negative for *Ureaplasma urealyticum* Within 24 Hours After Birth

Characteristic	Culturally negative (n=56)	Ureaplasma positive (n=20)
Born in UAB Hospital	84%	85%
Fetal membranes intact	67%	42%
Fetal membranes ruptured >24 h	20%	47%*
Clinical amnionitis	22%	35%
Caesarean section	54%	21%*
Mean (SD) gestational age (wk)	27 (2·0)	27 (1·75)
Birth-weight (g)	820 (123)	780 (143)
Race	34% white	40% white
Sex	51% males	70% males
Race/Sex:		
Black/F	29%	20%
Black/M	37%	40%
White/F	20%	10%
White/M	14%	30%
% infants with Apgar score ≤4 at 1 min/5 min	65/29	61/28
% apnoea	59	55
% requiring IPPV† on:	91	100
day of birth	77	90
day 3	59	50
day 5	38	38
Total days IPPV (median)	4	2
% hyaline membrane disease	80	73
% interstitial emphysema	17	27
% pneumothorax	15	20
% patent ductus arteriosus	50	35
% necrotising enterocolitis	13	25
% intraventricular haemorrhage, grades III or IV	55	46

*Different from culturally negative, $P < .01$.

IPPV, intermittent positive-pressure ventilation.

(Courtesy of Cassell GH, Waites KB, Crouse DT, et al: *Lancet* 2:240–245, July 30, 1988.)

low-birth-weight infants. Further study is warranted to determine why *U. urealyticum* respiratory infection is significantly associated with death, irrespective of the development of chronic lung disease.

▶ This is one of the more provocative reports of the past year and suggests that prematurity, in some instances, is an infectious disease, and that infection with *U. urealyticum* plays a central role in the etiology of chronic lung disease in some low-birth-weight infants. Holtzman and associates have provided an excellent and concise review of this subject (1) and conclude that, "In view of the continued prevalence of neonatal chronic lung disease despite numerous therapeutic interventions, the possible association of *U. urealyticum* colonization with BPD in very-low-birth-weight premature infants merits further investigation." To add to the intrigue, Madan et al. report (2) the isolation of genital *Mycoplasma* from 8.3% of 432 stillbirths and neonatal autopsies. Acute chorioamnionitis and funisitis were present significantly more often in cases with genital *Mycoplasma* than in those without these organisms. *Ureaplasma* is not recognized with conventional Gram stain and does not grow in routine cultures; it could have escaped detection all these years: an exciting observation that cries out for confirmation and a therapeutic trial.—F.A. Oski, M.D.

References

1. Holtzman RB, et al: *J Pediatr* 114:1061, 1989.
2. Madan E, et al: *Arch Pathol Lab Med* 112:749, 1988.

Simple Method for Securing Umbilical Catheters

South M, Magnay A (Univ of Cambridge; Birmingham Maternity Hosp, England)

Arch Dis Child 63:750–751, 1988 1–3

Umbilical arterial and venous catheterization are routinely used in the neonatal intensive care nursery. Most methods for catheter fixation involve tying loops of suture material around the base of the catheter and using a bridge constructed of adhesive tape attached to the catheter and to the skin of the infant's abdominal wall. Because of the many problems associated with this technique, an easy method was designed for securing umbilical catheters without involving the infant's tender abdominal skin. Moreover, this new method allows for easy repositioning of the catheter when needed.

Method.—After the catheter has been inserted to the required depth, a purse-string 3/0 black silk suture is placed into the cord stump. The needle is left attached to one free end. The base of the catheter is dried, and a piece of zinc oxide tape is folded around the catheter as close to the cord stump as possible. The needle of the suture is then passed through the tape, close to the catheter; the suture is tied and cut off close to the knot (Fig 1–1). The needle is then passed through the cord stump to transfix the umbilical vein through the zinc oxide tape on the other side of the catheter; the suture is tied and cut off.

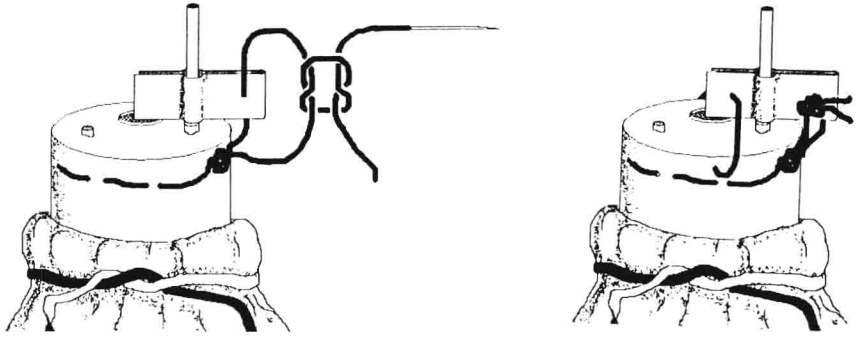

Fig 1–1.—**Left,** purse-string suture is passed through the zinc oxide tape and tied. **Right,** second suture is passed through the cord stump to transfix the umbilical vein. It is then taken through the zinc oxide tape on the opposite side to the first suture and then tied. (Courtesy of South M, Magnay A: *Arch Dis Child* 63:750–751, 1988.)

Since the technique was first used in 1985, more than 350 umbilical catheters have been secured by this method. Only 3 catheters became dislodged accidentally when the infants were out of their incubators to be weighed. All 3 infants were older than 2 weeks of age and the dried-up umbilical cord had separated from the cutaneous stump, leaving no secure fixation. This problem is presently being addressed by placing one of the sutures through the cutaneous part of the cord stump.

This new technique for securing umbilical catheters in newborn infants is easy to apply and has several distinct advantages over conventional taping methods.

Unexplained Neonatal Jaundice as an Early Diagnostic Sign of Septicemia in the Newborn

Linder N, Yatsiv I, Tsur M, Matoth I, Mandelberg A, Hoffman B, Yevin R, Tamir I (Hadassah Univ Hosp, Jerusalem)

J Perinatol 8:325–327, Fall 1988 1–4

Unconjugated hyperbilirubinemia during the first week of life is rarely considered an early sign of infection. A prospective study was undertaken to evaluate the frequency of unexplained unconjugated hyperbilirubinemia associated with bacterial infection during the first week of life. All 5,805 infants delivered between September 1984 and December 1986 were evaluated. Of these, 93 (1.6%) jaundiced newborns without evidence of septicemia fulfilled the following criteria for enrollment in the study: weight of more than 2,500 gm, gestational age of more than 38 weeks, age of less than 7 days, and an unexplained unconjugated bilirubin level of more than 170 μmol/L (more than 10 mg/dl) during the first 48 hours of life or more than 255 μmol/L (more than 5 mg/dl) thereafter. Infants with an underlying cause for jaundice were excluded (table). Sepsis work-up included complete blood count and blood and urine cultures.

Sepsis developed in 3 infants (3.2%) before any clinical suspicion was

Criteria for Exclusion From Study

1. Familial history
   Previous jaundiced infants (Lucey-Driscoll syndrome)
2. Fetal history
   Use of drugs during pregnancy
   Exposure to viral infection
   Use of oxytocin during labor
   Maternal hemolytic antigen
   Maternal diabetes
3. Neonate
   Hematological:
   Positive Coombs test
   Direct bilirubin >1.5 mg/dL
   Hematocrit >65%
   Abnormal RBC morphology
   Hypothyroidism
   Physical examination:
   Hematoma (enclosed hemorrhage)
   Respiratory distress syndrome
   Asphyxia

(Courtesy of Linder N, Yatsiv I, Tsur M, et al: *J Perinatol* 8:325–327, Fall 1988.)

aroused. This incidence was fivefold higher compared with infants without unconjugated hyperbilirubinemia and eightfold higher than in those with explained unconjugated hyperbilirubinemia.

Bacterial infection should be considered a possible cause of unexplained neonatal unconjugated hyperbilirubinemia during the first week of life regardless of the child's clinical condition.

▶ Conjugated hyperbilirubinemia, particularly after the first week of life, is a well-known diagnostic sign of septicemia, but unconjugated hyperbilirubinemia during the first week of life is rarely considered the single initial sign of infection. The 3.2% incidence of covert septicemia associated with unexplained unconjugated hyperbilirubinemia in this report is in agreement with 2 previous studies of this phenomenon ((1,2). Should we get blood cultures on every yellow baby? I think not. Cultures should be reserved for those term infants whose unconjugated bilirubin level reaches 15 mg% within the first 72 hours of life in the absence of such recognized risk factors as breast-feeding, maternal diabetes, oxytocin induction, oriental race, bruising and cephalohematoma, documented blood group incompatibility, or weight loss. For more on jaundice in the healthy term infant see the 1989 YEAR BOOK OF PEDIATRICS, pp 3–8.—F.A. Oski, M.D.

References

1. Danks DM, et al: *Aust Paediatr J* 1:193, 1965.
2. Rooney JC, et al: *Am J Dis Child* 122:39, 1971.

TABLE 1.—Number and Rate (Per 100) of Neonatal Hyperbilirubinemia (NHB) by Selected Maternal and Infant Characteristics

Factor	No. of Neonates	Rate, %	No. With NHB	Crude Odds Ratio	95% Confidence Intervals
Gestational age, wk/birth weight, G					
≥37/>2500 g	2292	4.36	100	1.00	. . .
≥37/<2500 g	48	8.33	4	1.99	0.70–5.66
<37	206	9.22	19	2.23*	1.33–3.72
Not recorded	755	3.18	24	0.72	0.45–1.15
Race					
White	2343	4.61	108	1.00	. . .
Black	231	1.73	4	0.37*	0.13–1.00
Other	81	6.17	5	1.36	0.54–3.43
Not recorded	646	4.64	30	1.01	0.67–1.53
Sex					
M	1673	4.78	80	1.17	0.89–1.63
F	1627	4.12	67	1.00	. . .
Plurality					
Singleton	3266	4.41	144	1.00	. . .
Twin	35	8.57	3	2.03	0.62–6.72
Year of birth					
1966–1970	441	3.85	17	1.00	. . .
1971–1975	1228	3.09	38	0.80	0.45–1.43
1976–1980	1088	5.61	61	1.48	0.86–2.57
1981–1986	544	5.70	31	1.51	0.82–2.76
Type of delivery					
Vaginal	2451	4.45	109	1.00	. . .
Cesarean section	368	5.98	22	1.34	0.84–2.15
Not recorded	482	3.32	16	0.74	0.43–1.26
Maternal age, years					
<14	1123	4.19	47	1.00	. . .
15–29	873	4.47	39	1.07	0.69–1.65
30–34	412	6.55	27	1.61	0.99–2.61
≥35	78	5.13	4	1.24	0.43–3.53
Not recorded	815	3.68	30	0.88	0.55–1.40
Gravidity					
1	973	5.55	54	1.00	. . .
2	964	3.94	38	0.70	0.46–1.07
≥3	885	4.63	41	0.83	0.55–1.25
Not recorded	479	2.92	14	0.51*	0.28–0.93
Anesthesia					
Local/none	899	5.67	51	1.00	. . .
Epidural	187	4.28	8	0.73	0.32–1.64
Spinal	547	5.67	31	1.00	0.61–1.62
General	293	4.10	12	0.71	0.35–1.40
Other/not recorded	1375	3.27	45	0.56*	0.37–0.86
Feeding					
Bottle	1685	3.20	54	1.00	. . .
Breast	1124	6.49	73	2.10*	1.46–3.01
Other/not recorded	492	4.07	20	1.28	0.76–2.16
Apgar score at 1 minute					
<7	226	7.96	18	1.86*	1.11–3.13
7–10	2501	4.44	111	1.00	. . .
Not recorded	574	3.14	18	0.70	0.42–1.16

*$P < .05$.

(Courtesy of Khoury MJ, Calle EE, Joesoef RM: *Am J Dis Child* 142:1065–1069, October 1988.)

Recurrence Risk of Neonatal Hyperbilirubinemia in Siblings
Khoury MJ, Calle EE, Joesoef RM (Centers for Disease Control, Atlanta)
Am J Dis Child 142:1065–1069, October 1988 1–5

Hyperbilirubinemia is a common medical problem occurring during the neonatal period. Many studies have investigated the relationship between obstetric and early neonatal factors and the occurrence of neonatal hyperbilirubinemia (NHB), but little is known about the role of genetic

TABLE 2.—Recurrence Risks of Neonatal Hyperbilirubinemia (NHB) Among Siblings, by Status of Prior Siblings

Child Order	Status of Prior Sibs	N	Risk of NHB, % (No.) of Patients	Odds Ratio (Confidence Interval)
1	. . .	1669	4.97 (83)	. . . (. . .)
≥2	No NHB	1545	3.56 (55)	1.00 (. . .)
	>1 NHB	87	10.34 (9)	3.13*(1.39-6.84)

*$P < .01$.
(Courtesy of Khoury MJ, Calle EE, Joesoef RM: *Am J Dis Child* 142:1065–1069, October 1988.)

TABLE 3.—Result of Modified Conditional Logistic Regression Analysis of Factors Affecting Risk of Neonatal Hyperbilirubinemia

Variable*	Adjusted Odds Ratio	95% Confidence Interval
Sibling pairwise odds ratio	2.37†	1.18-4.74
Year of birth		
≤1975	1.00	. . .
>1975	1.49†	1.03-2.15
Gestational age, wk/birth weight, g		
≥37/≥2500 g	1.00	. . .
≥37/<2500 g	1.93	0.66-5.62
<37	2.37†	1.42-3.94
Not recorded	0.83	0.52-1.32
Type of feeding		
Bottle	1.00	. . .
Breast	1.85†	1.27-2.71
Other	1.18	0.70-1.99
Neonatal asphyxia		
1-minute Apgar score, 7-10	1.00	. . .
1-minute Apgar score, <7	1.69	0.99-2.89
Not recorded	0.91	0.52-1.59

*Other variables considered were plurality, race, maternal age, gravidity, and type of delivery.
† $P < .05$.
(Courtesy of Khoury MJ, Calle EE, Joesoef RM: *Am J Dis Child* 142:1065–1069, October 1988.)

factors. The recurrence risk of NHB and severe NHB was examined in 1,669 sibships with 3,301 neonates born between 1966 and 1986 to 1,669 male United States Army veterans who were participating in a nationwide health study. The study population consisted of 580 sibships with 1 infant, 679 with 2, and 410 with 3 or more. Neonatal hyperbilirubinemia was considered to be present if the recorded peak bilirubin level was higher than 205 μmol/L in the absence of hemolytic disease of the newborn.

The risk of NHB in newborns with 1 or more siblings with NHB was 3.1 times higher than that of newborns who had siblings without NHB (Tables 1 and 2). Simultaneous adjustment for risk factors for NHB, such as feeding patterns, birth year, maternal obstetric events, and infant health variables, did not account for the excess in risk (Table 3). Moreover, the risk of severe NHB in newborns with 1 or more siblings with severe NHB was 12.5 times higher than that of newborns whose siblings did not have severe NHB.

Neonatal hyperbilirubinemia appears to have a familial nature. The higher risk of recurrence of NHB in siblings did not appear to be caused by environmental factors.

Effect of Antenatal Dexamethasone on Neonatal Leukocyte Count

Zachman RD, Bauer CR, Boehm J, Korones SB, Rigatto H, Rao AV (Univ of Wisconsin; Univ of Miami; Northwestern Univ; Univ of Tennessee, Memphis; Univ of Manitoba, Winnipeg; et al)

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Several studies have implicated antenatal maternal steroids as a cause of neonatal leukemoid reactions. In a prospective, double-blind, randomized antenatal steroid trial, the leukocyte count and differential white blood cell count during the first hour of life was determined in 164 neonates born of mothers receiving dexamethasone antenatally and 171 neonates of mothers who did not receive dexamethasone.

Incidence of High Leukocyte Counts in Neonates

	Number of Patients	
Criteria	Placebo	Steroid
WBC* ≥ 35,000	2	3†
WBC* ≥ 40,000	1	1
Total	171	164

*Total leukocyte count at 1 hour of life.
†One each at 5 hours, 5 days, and 9 days after last maternal steroid dose.
(Courtesy of Zachman RD, Bauer CR, Boehm J, et al: *J Perinatol* 8:111–113, Spring 1988.)