“The Second New Year” — Haggerty

School Readiness: An Overview for Pediatricians — Casey and Evans

Bacterial Meningitis — Smith

Croup and Related Disorders — Custer

Nephrotic Syndrome — Kelsch and Sedman
CONTENTS

COMMENTARY

3 “The Second New Year”
   Robert J. Haggerty

ARTICLES

4 School Readiness: An Overview for Pediatricians
   Patrick H. Casey, Larry D. Evans

11 Bacterial Meningitis
   Arnold L. Smith

19 Croup and Related Disorders
   Joseph R. Custer

30 Nephrotic Syndrome
   Robert C. Kelsch, Aileen B. Sedman

ABSTRACTS

38 HIV Testing of Infants Born to Infected Mothers

DEPARTMENT OF CORRECTIONS

18 Addendum

COVER

“Sara Handing a Toy to the Baby” was painted by Mary Cassatt (1845–1925). Cassatt, an American artist, was the daughter of a wealthy Philadelphia businessman. She went to Paris to study and never returned. Most of her paintings are of mothers and children, although she herself never married. This lovely painting shows an older sibling handing a toy to her younger brother. We all know that sibling relations are never this serene at all times, but we can always encourage the sharing and love so beautifully shown here. (This painting is reproduced with the permission of the Hill-Stead Museum, Farmington, CT).

ANSWER KEY

In this volume we have brought together all twelve issues of the fourteenth year of publication of Pediatrics in Review. This includes two Guides for Record Review, published by the American Board of Pediatrics, which served as supplements to the journal. These Guides include Chronic Abdominal Pain and Closed Head Injury. The articles and abstracts were developed to help readers achieve educational objectives set for the continuing education program of the American Academy of Pediatrics. We believe that they also contain material of use to a wider readership than members of the Academy who subscribed to the Pediatrics Review and Education Program (PREP), such as family physicians, residents, nurses, and other clinicians. We hope that you find them useful.

Robert J. Haggerty, MD
Editor

PEDIATRICS REVIEW AND EDUCATION PROGRAM
"The Second New Year"

With this volume, Pediatrics in Review begins its second year of publication with the new format and with most of the material being based on the core content statements developed by the American Board of Pediatrics that are the basis of the examination for renewal of certification. Of the more than 3800 such statements so far developed, we covered more than 1000 in 1992 and, more important, more than 300 of the 900 from which the 1993 examination will be based. By mid-1993, Pediatrics in Review plus the self-assessment part of PREP will have covered almost all of these core content statements, thereby enabling those who are preparing for the examination to be well-prepared.

I write this as I am returning from the 20th International Congress of Pediatrics held in Rio de Janeiro, Brazil, having renewed friendships with many pediatricians from around the world, made new ones, and heard presentations of the health problems of children in all parts of the globe. I am reminded that the role of the pediatrician is not only to maintain his or her cognitive knowledge base as presented in PREP, important as this is, but also to work to improve the lot of all children. For some pediatricians, being an advocate and an activist to achieve better health for all is an important role. James Grant, Director General of UNICEF, pointed out in his opening address that we are at one of history's few windows of opportunity, when with major conflicts between the East and West at an end (and in spite of the tragic ethnic violence), there is now a chance to use the resources previously committed to armaments to improve health and social conditions for children everywhere. Perhaps even more important than these material resources can be the opportunity to devote our attention and energy to work in our communities, states, nation, or on the world scene to make a better world for children.

The International Pediatric Association is a good vehicle for some pediatricians to do such work. Its commitment to implement the UNICEF Child Survival Program is one example of this. Emphasizing breast feeding, oral rehydration, immunizations, clean weaning foods, spacing of childbirth, and education of parents and children is an example of a sound program now being implemented in many developing countries. We would do well to see that it is implemented for all in our developed world.

While we all need to keep our knowledge base up-to-date, and I believe PREP is a good way to do this, there is another need—for pediatricians to make a New Year's resolution to see that the benefits of modern health care reach all children in our own society and throughout the world.

Robert J. Haggerty, MD
Editor

PIR Quiz-CME Credit

The American Academy of Pediatrics is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

The American Academy of Pediatrics designates this continuing medical education activity for 40 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

As an organization accredited for continuing medical education (CME), completion of the PREP program meets the criteria for 40 hours of credit toward the AAP PREP Education Award.

This program has been reviewed and is acceptable for 28 AOA Category 2-B CME hours by the American Osteopathic Association. For specific information, please consult with the AOA Department of Education.

In addition, this course has been approved for 40 NAPNAP contact hours. An individual requesting contact hours should submit proof of participation and verification of PREP accreditation to the NAPNAP National Office.

The questions for the PIR quiz are located at the end of each article in this issue. Each question has a SINGLE BEST ANSWER. To obtain credit, record your answers on the PIR Quiz Card found in the January issue, and return the card to the Academy. (PREP group participants will receive the PIR Quiz Card and Self-Assessment Credit Reply Sheet under separate cover.) To receive CME credit on the 1993 annual credit summary, you must be enrolled in PREP or subscribe to Pediatrics in Review and return the PIR Quiz Card by February 28, 1994. PIR Quiz Cards received after this deadline will be recorded in the year it is received; with cards from the 1993 PIR journals, accepted through December 31, 1995.

The PIR Quiz card is bound into the January issue. Complete the quizzes in each issue and send it to: American Academy of Pediatrics, PREP Office, PO Box 927, Elk Grove Village, IL 60009-0927.

The correct answers to the questions in this issue appear on the inside front cover.
REFERENCES

SUGGESTED READING
Meisels SJ. Uses and abuses of developmental screening and school readiness testing. Young Children. 1987;42:4-6, 68-73

PIR QUIZ
1. You are conducting the prekindergarten examination of a 5-year-old girl. Each of the following is essential for her school readiness except:
   A. Good physical health.
   B. Emotional maturity.
   C. Language richness.
   D. Social confidence.
   E. Formal preschool instruction.
2. Among the following physically healthy children, the one with the lowest risk of retention in kindergarten is:
   A. A 5½-year-old white girl whose birth weight was 1253 g.
   B. A 5½-year-old white boy whose mother smoked three packs of cigarettes daily during her pregnancy.
   C. A black girl whose fifth birthday falls one day before the cutoff date.
   D. A 5¼-year-old black boy who was full-term, of average birth weight, and free of gestational drug exposure.
   E. A 5¼-year-old white boy who was full-term, of average birth weight, and free of gestational drug exposure.
3. You are asked to assess the school readiness of a 5-year-old boy. The indicator with the poorest predictive validity is:
   A. Abnormal score on a specific school readiness test.
   B. Absence of age-typical skills upon DDST screening.
   C. Information from preschool group teachers.
   D. History of repeated foster home placement.
   E. Formal preschool instruction.
4. After completing a preschool examination, your 5-year-old patient, you believe, is mildly delayed in speech and motor development. Each of the following is part of appropriate management except:
   A. Full preschool evaluation by a psychologist or developmental pediatrician.
   B. Formal hearing assessment.
   C. Speech and language evaluation.
   D. Enrollment in a kindergarten readiness class.
   E. Creation of a monitoring plan to determine school progress.
5. Because of obvious precocity, your 5-year-old patient is formally tested and identified as highly gifted. With your help, his parents need to:
   A. Be assured that he confines his play at home to children of the same age.
   B. Resist any attempts by teachers to accelerate his academic placement.
   C. Place high demands on his performance at all times.
   D. Arrange for psychological evaluation in anticipation of social maladjustment.
   E. Recognize that the emotional needs of gifted and nongifted children are the same.

DEVELOPMENT
School Readiness

ality, emotional maturity, and degree and area of giftedness. Pediatricians can use their understanding of the child and family to assist in decisions regarding the gifted child.

Conclusion
Successful participation in school is the primary developmental milestone of young school-age children, whether typical, gifted, or at risk for school problems. The pediatrician's developmental perspective can enhance adjustment, expectations, and potential in school. As emphasis is increased on school readiness, pediatricians will continue to have the opportunity to identify and help plan for the entry into school of children at risk for school failure, to communicate specific knowledge regarding needs of children at medical risk, and to advocate for the rights of children at both ends of the school readiness spectrum. The pediatrician's role in this important area could be strengthened by emphasizing office school readiness evaluations and collaborative interchanges with parents, teachers, and other school personnel and officials.
Meningitis


PIR QUIZ

6. The greatest risk factor for bacterial meningitis in neonates is:
A. Maternal illness
B. Obstetric complications
C. Prematurity
D. Congenital abnormalities
E. Surgery

7. The most common manifestation of bacterial meningitis in the newborn is:
A. Alteration in temperature control
B. Respiratory distress
C. Bulging fontanel
D. Lethargy
E. Meningismus

8. In infancy and childhood, the major test to be performed on the cerebrospinal fluid is:
A. Gram stain
B. Bacteriologic culture
C. Antigen detection test
D. White blood cell count
E. Protein content

9. Antigen detection tests are equivalent in importance to bacteriologic cultures of cerebrospinal fluid for all purposes except:
A. Identification of etiologic agent
B. Use in antibiotic treatment before lumbar puncture
C. Information on antibiotic susceptibility
D. Verification of Gram stain
E. Prior treatment with ampicillin

10. Cerebral edema is most easily managed by:
A. Restriction of fluid intake to one third of maintenance
B. Mannitol diuresis
C. Lumbar puncture
D. Dexamethasone following early antibiotic therapy
E. Mechanical depression

11. Neurologic sequelae of meningitis include each of the following except:
A. Deafness
B. Hydrocephalus
C. Paresis
D. Attention deficit hyperactivity disorder
E. Seizures

12. When there is an outbreak of H influenzae meningitis in a day-care center, each of the following precautions should be observed except:
A. Center personnel should receive rifampin prophylaxis
B. Attendees, except for immunized children more than 2 years of age, should receive rifampin prophylaxis
C. Children should not attend day care until prophylaxis is instituted
D. Children beginning day-care attendance should receive rifampin
E. Siblings less than 48 months old who are not in the same center should receive rifampin

DEPARTMENT OF CORRECTIONS

Addendum

Inadvertently, in our comprehensive review of Rifampin Prophylaxis in Pediatrics in Review September 1992, page 394, the requirement that rifampin be administered to the index patient during hospitalization just before discharge was omitted. Please note this in your thinking when you approach a situation involving a Haemophilus influenzae type B infection. We regret this omission.

Steven P. Shelov, MD
Abstracts Editor

INFECTIONOUS DISEASE

13. The most common causes of laryngotracheitis (croup) are:
A. Influenza viruses.
B. Mycoplasma.
C. Adenoviruses.
D. Respiratory syncytial viruses.
E. Parainfluenza viruses.
14. A 2-year-old infant who presents with a barking or “seal-like” cough, inspiratory stridor, and low-grade fever after a few days of an upper respiratory infection most likely has:
A. Epiglottitis.
B. Viral croup.
C. Bacterial tracheitis.
D. A foreign body.
E. Spasmodic croup.
15. Hospital management of viral croup should include the following:
A. Oxygen.
B. Racemic epinephrine.
C. Steroids.
D. Oxygen, racemic epinephrine, and steroids.
E. Sedation and all of the above.
16. True statements about epiglottitis include all of the following except:
A. Pneumonitis occurs in less than 20% of cases.
B. Blood cultures are positive in 90% of cases.
C. Common associated findings are drooling, agitation, and lack of a spontaneous cough.
D. Blood cultures should be drawn and an IV placed prior to supportive measures being instituted.
E. Ampicillin is no longer the drug of choice because 30% of H influenzae species are resistant to this drug.
17. Characteristics of bacterial tracheitis include all of the following except:
A. Hoarse voice with high fever.
B. Paroxysms of coughing.
C. Sparse secretions.
D. Stridor.
E. Subternal pain in older children.
18. Characteristics of foreign body aspiration include all of the following except:
A. A large percentage of aspirated foreign bodies present with few or no symptoms.
B. Items classified as “safe” by federal regulation are not implicated in aspiration.
C. Cough is a presenting sign in at least 80% of cases.
D. Radiographs will miss one quarter to one third of foreign body aspirations.
E. Infants should receive back blows rather than abdominal thrusts in attempts to dislodge the foreign body.


PEDS IN REVIEW Vol. 14 No. 1 January 1993 29
RENAL DISORDERS
Nephrotic Syndrome


PIR QUIZ

19. The initial study of a child with edema and massive proteinuria should include each of the following except:
A. Intravenous urography.
B. Determination of serum electrolyte levels.
C. Determination of serum urea nitrogen and creatinine levels.
D. Determination of C3 and C4 complement levels

20. The following patients have edema and massive proteinuria. Renal biopsy is indicated in each of them except:
A. A 3-week-old infant girl with no other findings.
B. A 4-year-old boy who also has microscopic hematuria and whose mother has hematuria.
C. A 12-year-old girl with no other clinical findings.
D. A school-age child who appears to have acute post-streptococcal glomerulonephritis.

21. The urgent reduction of a first episode of severe edema in a child with minimal change nephrotic syndrome is most reliably and safely accomplished by:
A. Hemodialysis.
B. Intravenous administration of albumin.

C. Oral administration of a corticosteroid.
D. Administration of an immunosuppressive agent.
E. Oral administration of a diuretic.

22. Each of the following statements regarding frequently relapsing and steroid-resistant nephrotic syndrome is true except:
A. Frequently relapsing nephrotic syndrome is defined as two or more relapses within a 6-month period.
B. Steroid-resistant nephrotic syndrome is defined as nephrotic syndrome that relapses during steroid therapy or within 2 weeks after the discontinuation of such therapy.
C. Steroid-resistant nephrotic syndrome tends to enter permanent remission during adolescence.
D. Steroid-resistant nephrotic syndrome has a better prognosis than does frequently relapsing nephrotic syndrome.
E. Frequently relapsing nephrotic syndrome has a good prognosis if reinstitution of steroid therapy with each relapse regularly produces a new remission.

ABSTRACT

HIV Testing of Infants Born to Infected Mothers


The human immunodeficiency virus (HIV) increasingly is being spread through intravenous drug use and heterosexual contact, leading to higher rates of infection among women of childbearing age. As a result, perinatal transmission of the virus now accounts for more than 90% of HIV infection among preadolescent children in the United States. Current estimates suggest that 15% to 35% of infants born to HIV-infected women are themselves infected, either in utero or intrauterine. With the advent of treatment against HIV directly as well as against Pneumocystis carinii pneumonia prophylactically, early identification of those newborns who actually have been infected perinatally has become an issue of real consequence. Unfortunately, distinguishing infected babies before they become symptomatic from those infants who, despite exposure to HIV, have escaped perinatal infection