Pediatrics Review and Education Program

Advances in the Management of Acute Asthma — Murphy and Kelly

Child Sexual Abuse — Hymel and Jenny

Quality Improvement: An ACQIP Exercise on Otitis Media — Sebring and Division of Quality Care

Consultation with the Specialist: Apparent Life-Threatening Events — Brooks
CONTENTS

ARTICLES

227 Advances in the Management of Acute Asthma in Children
Shirley J. Murphy and H. William Kelly

236 Child Sexual Abuse
Kent P. Hymel and Carole Jenny

251 Quality Improvement: An ACQIP Exercise on the Management of Otitis Media
Robert H. Sebring and the Staff of the AAP Division of Quality Care

257 Consultation with the Specialist: Apparent Life-Threatening Events
John G. Brooks

COVER

Each of our 1996 issues of Pediatrics in Review will feature a work of art submitted to our cover art contest this past year. We received more than 200 entries and have chosen 12 to appear on our covers—four from each of three age groups: 5 to 7 years, 8 to 10 years, and 11 to 15 years. The entrants were asked to submit a drawing of what they like to do best. Most entries will be displayed by the American Academy of Pediatrics at various sites.

This month’s work, by 5-year-old Kelly Hilton, is of her eating an ice cream cone. Kelly lives in Fairfield, CT; her pediatrician is Taesum P. Chung, MD.

ANSWER KEY

PIR QUIZ

1. Effective management of acute asthma demands objective assessment of airflow obstruction. A correct statement about home use of peak flow measurements in older children is that:
   A. A peak expiratory flow equal to 70% of personal best requires hospital management.
   B. Early response to intensive use of beta-agonists predicts need for hospitalization.
   C. Peak flow assessment cannot be used reliably to initiate oral corticosteroid therapy.
   D. Peak flow assessment is particularly helpful in the management of exercise-induced bronchospasm.
   E. The availability of a peak flow meter is unlikely to influence the outcome of hyperacute attacks.

2. Beta-agonists are the bronchodilators of choice for acute attacks of asthma. A correct statement about the use of such agents is that:
   A. Continuous nebulization should not be used in children younger than 2 years of age.
   B. Dry powder inhalers are especially useful in children between 3 and 5 years of age.
   C. Intravenous infusion is more effective than nebulization in reversing a severe attack.
   D. Metered dose inhalers with spacers are more efficient than nebulizers in delivering medication to children older than 6 years of age.
   E. Nebulized beta-agonists are ineffective in the treatment of acute airway obstruction in young infants.

3. The role of anticholinergics in the management of acute severe asthma continues to evolve. A correct statement about the use of such agents is that:
   A. Atropine sulfate is the drug of choice for young children.
   B. Ipratropium bromide must be administered separately from beta-agonists.
   C. Ipratropium bromide should be administered routinely to all patients presenting to the emergency department having an acute asthma attack.
   D. Repeated doses of nebulized ipratropium bromide are associated with rare but serious central nervous system side effects.
   E. The additive effect of ipratropium bromide is most pronounced in patients who have acute severe obstruction.

4. The inflammatory nature of asthma has been documented and the role of systemic steroids in management is increasingly clarified. A correct statement about the use of systemic steroids in the management of asthma is that:
   A. Corticosteroids are the most important agents for managing hyperacute attacks.
   B. It is necessary to taper pulse doses over 10 to 14 days to avoid potentially fatal rebound bronchoconstriction.
   C. Multiple daily doses may be required to achieve maximum effect.
   D. Oral corticosteroids should not be initiated without first documenting the severity of an attack in the office or emergency department.
   E. The intravenous route of administration is always preferred in hospitalized patients.

5. The role of the water-soluble theophylline complex aminophylline in acute asthma continues to be refined. A correct statement about the use of aminophylline in the management of acute severe attacks is that:
   A. The elimination rate of theophylline varies little among patients.
   B. The presence of a systemic viral infection requires an increase in aminophylline dose to maintain serum concentrations of theophylline at therapeutic levels.
   C. The simultaneous use of macrolide antibiotics requires a decrease in aminophylline dose to avoid toxic serum concentrations of theophylline.
   D. Theophylline produces additive bronchodilation when added to inhaled beta-agonist therapy.
   E. Theophylline toxicity does not occur when serum concentrations are less than 30 mcg/mL.
on the issue of lost virginity. In these families, a pediatrician’s statement that a child has lost her virginity through sexual abuse may precipitate significant family rejection of the child. When asked directly if a child has lost her virginity, consider telling the child and family that she will only lose her virginity when she has sexual relations with someone she chooses. At the time of the acute medical evaluation, be prepared to listen patiently to these concerns and provide objective feedback where appropriate.

ONGOING SUPPORT

Arrange acute psychological evaluation for the child when sexual abuse is confirmed or suspected and facilitate long-term counseling thereafter. Avoid the temptation to arrange private therapy for the perpetrators of intrafamilial abuse without involving the child protection system. Sexual abuse can recur even when the perpetrator is in therapy. Involve the child protective services system to help assure the ongoing safety of the child.

Summary

Multiple obstacles can hinder the medical evaluation of suspected child sexual abuse in pediatric primary care. The need for diagnostic accuracy is high. Knowledge of sexual abuse risk factors, an understanding of the victimization process, and awareness of the varied clinical presentations of sexual abuse can be of assistance.

Open-ended questioning of the suspected victim is the most critical component of the evaluation. Skilled medical interviewing requires time, training, patience, and practice. Pediatricians lacking any of these four requirements should defer interviewing in sexual abuse cases to other professionals.

Abnormal physical findings from sexual abuse are uncommon. Colposcopy has assisted pediatricians greatly in reaching consensus regarding diagnostic physical findings. Cases of acute sexual assault require familiarity with the forensic rape examination, STD screening and prophylaxis, and pregnancy prevention. Victimization from sexual abuse continues long after the abusive acts end, often requiring long-term therapeutic inter-

vention.

An emerging standard of care for medical evaluations of suspected child sexual abuse recognizes the requirement for patience and compassion while retaining objectivity. The pediatrician’s primary concern must be for the child’s physical and emotional well-being.

SUGGESTED READING


(continued on page 250)
**PIR QUIZ**

9. With respect to laboratory screening for Cindy, which one of the following procedures clearly is not necessary?
   A. Culture of vaginal secretions for *Chlamydia trachomatis*.
   B. Inspection for seminal fluid.
   C. Serology tests for hepatitis B.
   D. Serology tests for human immunodeficiency virus.
   E. Serology tests for syphilis.

10. Jennifer is a 12-year-old Caucasian whose mother has brought her to you because she is concerned that Jennifer may have been sexually abused. In your preliminary talks with the mother, you can reassure her that if sexual abuse did occur:
   A. Once treatment begins, the problem of further abuse ends.
   B. Once treatment begins, the presence of a protective parent is no longer essential.
   C. Results of the physical examination would not be normal.
   D. Sexually transmitted disease is uncommon.
   E. The perpetrator most likely was a stranger.

---

**PIR Quiz-CME Credit**

A short quiz can be found at the end of each article in *Pediatrics in Review*. Use the Quiz Card (bound into the January issue) to record your answers. Each question has a SINGLE BEST ANSWER. The answers to the questions appear on the inside front cover of each issue. Three AMA Category 1 continuing medical education (CME) credits are awarded per completed issue for a yearly total of 36 CME credits.

To obtain credit, record your answers on the *Pediatrics in Review* Quiz Card and send it to the American Academy of Pediatrics, PREP Office, PO Box 927, Elk Grove Village, IL 60009-0927. To receive CME credit on the 1996 annual credit transcript, Quiz Cards must be received by February 28, 1997. Quiz Cards received after this deadline will be recorded in the year they are received. Quiz Cards from the 1996 volume of *Pediatrics in Review* will be accepted through December 31, 1998. A special note to PREP group subscribers: You will receive the Quiz Card and the Self-Assessment Credit Reply Sheet under separate cover.

The American Academy of Pediatrics (AAP) is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians. The American Academy of Pediatrics designates the Pediatrics Review and Education Program (PREP) for 56 credit hours in Category 1 of the Physician’s Recognition Award of the American Medical Association. PREP meets the criteria for 56 hours of credit toward the AAP PREP Education Award.

PREP has been reviewed and is acceptable for 56 prescribed hours by the American Academy of Family Physicians. (Term of approval: beginning date January 1996. Enduring materials are approved for 1 year with option to request renewal.) For specific information, please consult the AAP Office of Continuing Medical Education.

PREP has been reviewed and is acceptable for 32 AOA Category 2-B CME hours by the American Osteopathic Association. For specific information, please consult the AOA Department of Education.

PREP has been approved for 56 NAPNAP contact hours. An individual requesting contact hours should submit proof of participation and verification of PREP accreditation to the NAPNAP National Office.

In addition, the Canadian Paediatric Society has approved PREP as one method for pediatricians to demonstrate maintenance of competence (MOCOMP). For specific information, please consult the CPS directly.

**PREP EDUCATION AWARD:**

The AAP PREP Education Award recognizes Academy Fellows and Candidate Fellows who earn a minimum of 150 AAP-approved CME credits over 3 consecutive years. The Award will be mailed automatically in July 1997 to all individuals who qualify.

To qualify for the PREP Education Award, a Fellow or Candidate Fellow must:

- Earn a minimum of 75 credit hours through participation in PREP or PREP: The Course, and
- Earn the remaining credit hours (75 hours) through other Academy-sponsored or -approved CME activities. This may include: AAP Spring Session or Annual Meeting; AAP CME courses; ACQIP; Pediatric UPDATE Audiocassette Tape Program; or other AAP approved courses.