

the Pediatric Emergency Messenger



Newsletter of the Committee on
Pediatric Emergency Medicine, Tennessee Chapter
American Academy of Pediatrics

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Successful Collaboration!

Organizing a CME conference can be a real headache! There are innumerable small tasks, each of which must be attended to, and despite best efforts, things sometimes just don't go as planned. I chaired the first statewide pediatric emergency medicine conference in Knoxville on September 13-14, 2002. Participants totaled 150 from across the state with a diversity of professional backgrounds including paramedics, nurses, respiratory therapists, and physicians. There were 20 instructors including representatives from each of the four comprehensive regional pediatric centers. The Tennessee Chapter of the American Academy of Pediatrics and the Children's Emergency Care Alliance organized the event and

collaboration between these organizers was exemplary. All involved enjoyed the benefit of networking with colleagues from across the state.

The conference fee was intentionally kept remarkably low to make the conference affordable to as many professionals as possible: a strategy which seemed to work in attracting participants. The low fee was enabled by corporate educational grants, and a special thank you is due to East Tennessee Children's Hospital, TC

Thompson Children's Hospital, Vanderbilt Children's Hospital, and LeBonheur Children's Medical Center for their generosity.

Beyond the continuing medical education...this statewide meeting offered unique benefits that may not necessarily be found at national meetings. Tennessee practitioners were able to greet old friends,

"All enjoyed the benefit of networking with colleagues from across the state"

make new contacts, and communicate over meals and breaks. There were opportunities to discuss common problems and formulate solutions. Regional practice styles were shared. Local corporate representatives were on hand and provided personal customer service. All of these benefits, in addition to the expert medical information, added up to provide an enriching conference for participants and a very fulfilling experience for myself. The next statewide conference is planned for September 12-13, 2003 and will take place in Memphis, hosted by LeBonheur Children's Medical Center.

Get involved, stay informed, and enhance the care you provide your pediatric patients!

Robert Lembersky, MD
Knoxville

Tricks of the Trade

Editors note: this is the first of a two part series by Dr. Herman.

Most docs with any experience have picked up a few little tricks or tidbits of information during their careers that make them more efficient or seem smarter than the "newbie" coming out of training. My goal for this article is to refresh your memory regarding tricks you might have learned about or used in the past and possibly introduce a few new tricks that may make your job easier.

One of the more dramatic presentations to my ER is the child who has run into a lit cigarette burning their cornea or who burned their eye while using a curling iron. The child has a cloudy, opaque cornea and the parent complains that the child has been blinded. Instead of sending this patient off to an ophthalmologist straight away, instill a few drops of topical anesthetic, swab off the cloudy, corneal epithelium and "voila", the child can see again. Now treat this problem as you would any other corneal abrasion. I would refer to ophthalmology if the burn seemed deep, there was associated hyphema, blurred vision or persistent pain. Remember to keep a healthy index of suspicion for child abuse, as you would with any burn injury.

Other common eye problems we encounter include super glue to the eye lids, or metallic foreign bodies embedded in the cornea. For the super glue victim, just apply a petrolatum based ointment, and wait. The lids will open after a brief period of time. The metallic foreign body should be removed using a slit lamp in the older child or with "loops" when the child is too young for the slit lamp. Once removed, debride the rust ring with an alger brush. Ophthalmology should see these patients in a day or two to assess for any residual rust ring and the status of the healing cornea.

Common Nasal Foreign Bodies include such things as nuts, beads, beans, crayons, and Polyfil. For removal, one might try

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Five Articles from the 2002 PEM Literature That May Change Your Practice

1. A randomized clinical trial of analgesia in children with acute abdominal pain. Kim MK, Strait RT, Sato TT, Hennes HM: *Acad Emerg Med* 2002;9(4):281-287.

This study from Milwaukee Children's examined the question of whether narcotic analgesia for abdominal pain would disguise surgical conditions. 60 patients, 5-18 years of age, with acute abdominal pain received either 0.1 mg/kg IV morphine or an equivalent volume of saline placebo. Surgeons and EM physicians evaluated the patients independently. The morphine group had a significantly greater pain reduction, yet those children with surgical conditions had persistent tenderness on exam and all those requiring operation were identified. In this age of CT availability, early pain relief for our patients is becoming *de rigueur*.

2. Very early exposure to erythromycin and infantile hypertrophic pyloric stenosis. Cooper WO, Griffin MR, Arbogast P, et al: *Arch Pediatr Adolesc Med* 2002;156:647-650.

A retrospective cohort study of Medicaid and TennCare births from 1985-97, this effort established an association between exposure to erythromycin between 3 and 13 days of age and an increased risk (7.9 times) of developing pyloric stenosis. Children who received erythromycin after 13 days of age or other antibiotics evinced no increased risk of HPS. Erythromycin is known to promote gut motility, and this may play a role during a vulnerable window in intestinal development. Interestingly, similar data from the group at UAB linking prior recent antibiotic therapy with increased intussusception risk are in press. Just a bit more fuel advocating antibiotic restraint.

3. Risk of hemolytic-uremic syndrome after antibiotic treatment of *Escherichia coli* O157:H7 enteritis: a meta-analysis. Safdar N, Said A, Gangnon RE, Maki DG: *JAMA* 2002;288(8):996-1001.

In follow-up to a 2000 article by Wong, et al in the *New England Journal of Medicine*, which advanced the notion that antibiotic treatment of children with diarrheal illness due to *E. coli* O157:H7 is associated with increased risk of HUS, this

group performed a meta-analysis of previous literature on the subject, and found no apparent increased risk of HUS (odds ratio was only 1.15, 95%CI = 0.79-1.68). They point out that the Wong study was small and lacked statistical power to make the association. So, on this one, the jury's still out and the question requires more study.

4. Concurrent serious bacterial infections in 2396 infants and children hospitalized with respiratory syncytial virus lower respiratory infections. Purcell K, Fergie J: *Arch Pediatr Adolesc Med* 2002;156:322-324.

This retrospective review of a large cohort of patients with documented RSV (positive antigen or culture) over 7 years found that only 39 (1.6%) had positive coincident bacterial cultures. The 12 positive blood cultures all grew common contaminants; there were no positive CSF cultures; and there were only 27 positive cultures with urinary pathogens. This echoes a growing body of literature that indicates RSV-positive patients rarely have concurrent serious bacterial illnesses. The authors argue that in an infant or child with clinical bronchiolitis and a positive RSV antigen, no sepsis workup is needed, even in the presence of fever. Thus, RSV-testing, which appears to have lost its appeal for cohorting pur-

poses, may have utility as a screen for febrile infants in whom we may be able to forego bacterial goose-chases. This is particularly true in light of the vaccination successes of the past decade, i.e.: *H. influenzae* type b and now *S. pneumoniae*.

5. Diabetic ketoacidosis and cerebral edema. Bohn D, Daneman D: *Curr Opin Pediatr* 2002;14(3):287-291.

Less of a study and more of a review and commentary, this article summarizes our knowledge regarding the pathophysiology of cerebral edema in DKA. The precise cause appears to be multifactorial and is not yet fully understood, but our traditional therapy may have as much to do with development of cerebral edema as the disease process itself. The authors state that current consensus in DKA management emphasizes slow correction: NO hypotonic fluids; isotonic fluids in conservative amounts (7-10 ml/kg bolus); NO IV insulin bolus, as it provides no therapeutic benefit and may be harmful; and a slow (0.05 unit/kg/hr) insulin infusion. The old ways of doing things are coming under increased scrutiny and some of them are not holding up.

Tim Givens, MD

Associate Professor of

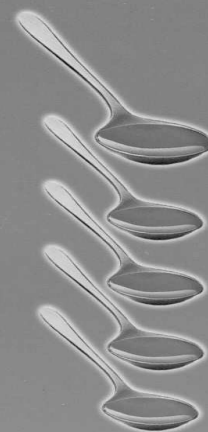
Emergency Medicine and Pediatrics
Vanderbilt University School of Medicine

Nashville

**effective
therapy**

**(no spoonful of
sugar necessary)**

**Now approved for
AOM as single dose
therapy at 30 mg/kg**



Zithromax
(azithromycin for oral suspension) ONCE DAILY FOR 5 DAYS

New Rules on Anesthesia and Sedation for Dentists

The Board of Dentistry passed their new rules on Anesthesia and Sedation (amending Rule 0460-2-.07) at their meeting September 18-20, 2002 in Nashville. The new rules represent the basic substance of the rules proposed by the Tennessee Dental Association committee chaired by Dr. Charles Landis. The Department of Health objected to the site visits envisioned by the TDA and the Board agreed to remove that requirement from the rules with the understanding that the subject of site visits would be reconsidered in one year. The rules now go to the Attorney General and, I believe, the Secretary of State, for final promulgation.

The Board considered the testimony taken at public hearings on the rules including those we submitted with the support of the TDA committee regarding children. The Board accepted many of our amendments. The Board changed the definition of basic life support throughout to make it clear that a health care provider life support course referred to training in CPR for victims of all ages. Medications must be given under the direct supervision of the dentist. Dentists performing procedural sedation on pediatric patients must provide evidence of training in pediatric sedation techniques and in pediatric resuscitation. Appropriate sized equipment must be available. Patients must be appropriately responsive prior to discharge.

There are three major areas of concern that the Board chose not to address.

1. There is, for all practical purposes, no regulation of the use of anxiolysis. The appropriateness of the qualifications and office preparedness of dental practitioners utilizing these potentially sedating medications on infants and children will be left to the judgment of that practitioner. The practice of prescribing these medications for caregivers to give at home in order to minimize delays due to the onset of action of the medication is not proscribed despite our request to do so because of reported deaths in transit to the office from this practice.
2. Training requirements are inconsistent



and vague. Support personnel are not required to have any training in the recognition and management of the complications of sedation/anesthesia in pediatric patients. Only basic life support training is required although it is the responsibility of each dentist to have adequately trained staff according to protocols established by the dentist. Dentists must show a current ACLS certification on their permit application, but a current PALS certification is not required if they will be sedating children. Pediatric dentists, and only pediatric dentists, can substitute PALS for ACLS. There is no requirement for practitioners sedating children to participate in any CME or update courses with pediatric content.

3. The clause permitting the waiving of taking vital signs if prevented by the patient's age remains in the rules.

Despite these concerns, the new rules significantly improve the safeguards for patients overall and should give the Board greater ability to supervise sedation practices in offices. The TDA sedation committee remains actively involved in their concern for implementing and improving the rules and the pediatric community is well represented there by Dr. George Adams. Through Dr. Adams and Dr. Landis, TNAAP has established a respectful and beneficial dialogue with the TDA on procedural sedation that will hopefully continue. As the new rule is implemented, chapter members may be able to provide assistance to dental colleagues in their communities or on their medical staffs in regards to office preparedness for pediatric emergencies.

Joseph Weinberg, MD
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Did You Know?

Suicide is now the fourth leading cause of death in children age 10-14*

* Reference from www.jasonfoundation.com

Chairman's Message

Get involved in the Tennessee Chapter

The Committee on Pediatric Emergency Medicine of the TNAAP would like to highlight another great year and invite you to become involved in the Tennessee Chapter. Our committee is simply an example of the great impact chapter members can have when they work together. Here are some of our highlights:

The *Pediatric Emergency Messenger* newsletter gets a new look. The newsletter now has new paper, a new layout, minimal advertisements, and hopefully great information that will improve your practice. We always appreciate and need your comments and suggestions for articles.

Our new annual conference, hosted in September, was a huge success. The collaboration by TNAAP and Children's Emergency Care Alliance allowed for a great meeting agenda for physicians, nurses, and prehospital providers alike. We plan to move this meeting around the state each year and we look forward to another great meeting in September, 2003 in Memphis. For those of you unfamiliar with Children's Emergency Care Alliance, this is a new and upcoming non-profit foundation looking to improve pediatric emergency care and injury prevention across the state.

The Committee on Pediatric Emergency Medicine also meets several times a year via a conference call to discuss pediatric emergency medicine issues, the newsletter, and any topics involving pediatrics and pediatric emergencies. It is a great forum to exchange ideas and collaborate with folks from across the state. Through Dr. Joe Weinberg, we have been involved in the discussion of the new dental sedation guidelines outlined in this newsletter.

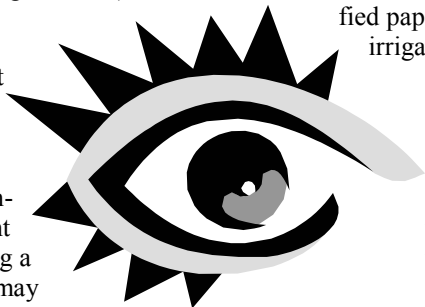
We look forward to another great year and hope to continue to improve on all the projects this committee is working on. If you would like to get involved in this committee or another committee within the Tennessee Chapter please contact Catherine Fenner at tnaap@aol.com. The committees are open to all members of the Tennessee Chapter and it is never too late to join.

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Tricks of the Trade (continued)

positive pressure (blowing the nose) instituted by the patient or the “kiss” technique¹. In this procedure the parent places their mouth on the patient’s mouth and blows in a quick breath while occluding the uninvolved nostril. If a parent is not available or willing a self inflating ambu bag may be used². In some situations a bal-



loon catheter (small foley or fogarty catheter) may be more appropriate. Simply pass the catheter beyond the foreign body, inflate the balloon and withdraw the catheter. Lichtenstein reported success with nasal irrigation to accomplish the same end⁴. Occasionally the material is easily identified and can be removed by blunting a needle and then inserting it into the material. Twirling the needle will capture the material and then removal is just a matter of withdrawing the needle. Of course such stand-bys as a bayonette forcep or suction catheter should not be forgotten.

When it comes to foreign bodies in the external ear canals, other techniques may be needed. In these situations you may be able to remove the object under direct visu-

alization with a cerumen spoon, or modified paper clip. Sometimes irrigation will work. Novel approaches have been described using superglue on the blunt end of an orange stick, or the use of a magnet if the object is metallic. For bugs, immersion oil may allow the insect to back out of the canal, to the pleasant surprise of the patient and parents.

Other types of foreign bodies presenting to an ER include fish hooks, ear ring backs, ear rings, and vaginal foreign bodies, to name a few. One of my favorites is the “fish hook” patient. Here the challenge may be to extricate the hook without hurting the patient or ruining an expensive lure. Various techniques have been used for years to resolve this problem. One may simply “suture” the hook on through the skin and then cut either the shank or barb and remove the hook. This ruins the lure. Alternatively, using a piece of stout fish line or umbilical tape one can pull on the curve of the hook while simultaneously depressing the eyelet. If done in

a quick, decisive manner, the hook will come flying out, with very little discomfort. Many a fisherman has used this technique to save their day of fishing. My personal favorite is to float an 18 gauge needle over the barb of the embedded hook. Once the barb is encased in the needles shaft, I can remove the hook as easily as I would remove a straight pin from the patient’s skin. Both of these techniques preserve the hook and lure, resulting in a grateful fisherman.

References:

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2. Finkelstein JA. Oral ambu-bag insufflation to remove unilateral nasal foreign body Am J Emerg Med 1996;14:57-58.
3. Henry L, Chamberlain J. Removal of foreign bodies from esophagus and noses with the use of a Foley catheter. Surgery 1972;71:918-921.
4. Lichtenstein R, Guidice EL. Nasal wash technique for nasal foreign body removal, Ped Emerg Care 2000; 16;59-60

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Do you have any pediatric emergency issues you would like to see addressed in this newsletter? We welcome your comments and suggestions. Please email the editor at: rlembersky@pol.net

