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New standard of care for *Pneumocystis* pneumonia prophylaxis?

— Sarah S. Long, MD

Shortly on the heels of implementing the first aggressive protocols for treatment of childhood leukemia in the early 1970s, there followed a rapid and remarkable number of cases and deaths due to *Pneumocystis* pneumonia (PCP), the organism first called *P carinii*, now *P jirovecii*. Seemingly a threat to the lifesaving treatment of leukemia using chemotherapy, similarly rapid discovery of the cause of pneumonia and its highly effective and simple prevention by orally administered trimethoprim/sulfamethoxazole (TMP/SMX) saved the day. Thousands of children with cancer have been saved over the last 40 years through PCP prophylaxis, which has been applied successfully to the broadening group of today's children at risk because of immunocompromising disease or treatment.

A variety of prophylactic TMP/SMX regimens of mg/kg TMP dose and number of days/week of dosing have been "favored" by different subspecialists, centers, countries, or for different underlying conditions. Success has been virtually universal. It shouldn't be so surprising then that Caselli et al across Oncology Centers in Italy recorded 7 different TMP/SMX administration regimens in 2466 children with leukemia/lymphoma or solid tumor, followed children for occurrence of PCP pneumonia, and found universal prevention in those who were adherent to any regimen. Among study enrollees, 689 received a total dose of TMP/SMX of 5 to 10 mg TMP/kg/week divided into 2 doses on a single day (minimum TMP exposure), and 1371 received 15 mg TMP/kg/week divided into 2 doses per day on 3 days per week (maximum TMP exposure). No case of PCP occurred in either group. In a recently investigated cohort of immunocompetent and immunocompromised patients in Italy, 25.5% were found by PCR testing of respiratory secretions to be colonized with *P jirovecii* (*Infect Genet Evol* 2013; 14:68-72). Exposure and risk of PCP in Italian study subjects thus was almost certain.

This study by Caselli et al is pivotal evidence in support of simplifying PCP prophylaxis standard of care across specialties and countries. Minimizing TMP/SMX exposure minimizes risk of myelosuppressive side effects. A critically important caveat is that "perfect" adherence to consumption of the fewer doses of TMP/SMX on the same day each week might be necessary to hold the line against PCP.

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Family participation during intensive care rounds

— Robert W. Wilmott, MD

Although parents prefer to attend morning rounds and have reported increased satisfaction with care when they do, physicians express a variety of opinions and concerns. In this issue of *The Journal*, Stickney et al at Harvard University and Boston Childrens Hospital report a cross-sectional survey of 100 parents and 131 providers in a tertiary care pediatric intensive care unit to investigate their perception. They found that many more parents reported a preference to attend rounds than healthcare providers reported a preference for parental presence. There also were significant differences in the perception of understanding of parents, with healthcare providers significantly less likely to perceive that parents understood both the format and content of rounds. Future efforts to increase parent participation in rounds will need to address the issues raised by this study.

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Injuries to children of children

— Thomas R. Welch, MD

“Common wisdom” has it that the children of teenage parents are a vulnerable group, at risk for injuries, including nonaccidental ones. However, as is often the case, this “wisdom” never has been carefully validated.

In this issue of *The Journal*, Robertson et al report an examination of emergency department records from 3 years in the very busy Children’s Medical Center Dallas trauma center. They extracted records of children under age 7 years with a guarantor under age 20 years. The records were carefully reviewed, including review by two experts in abusive injuries.

Among the nearly 700 children studied, about one-half had skin bruising. Falls, nurse-maids elbow, and ingestions were typical mechanisms of injury. The rate of intentional injury in this series was quite low.

These data may become useful in designing preventive strategies, especially educational programs for teenage parents.

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Association of childhood asthma with late preterm and early term birth

— Robert W. Wilmott, MD

In this issue of *The Journal*, Harju et al in the Department of Obstetrics and Gynecology at Kuopio University Hospital, Finland, report a retrospective study of children born preterm or at early term with regards to risk of asthma. They used an observational, hospital-based, case-controlled design to enroll 44 173 women. The results showed that children born before 32 weeks gestation had a significantly increased risk of asthma (adjusted OR 3.9). The risk of asthma was also increased in late preterm deliveries and in early term deliveries. Delivery at 41 weeks gestation or later was associated with a decreased risk of asthma. The majority of cases in children born before term were in the early term group. So, even though there was an inverse relationship between individual risk of asthma and gestational age of birth, the the highest incidence was the result of late preterm and early term deliveries. Current initiatives to reduce rates of prematurity may have a positive impact on rates of asthma in children.

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Repeat hospitalizations for childhood asthma

— Robert W. Wilmott, MD

Asthma is one of the most common causes of hospital admission in childhood, yet it is difficult to predict which children with asthma are most likely to experience readmission. This question was addressed by Kenyan et al from Philadelphia and Boston, and the results are published in this issue of *The Journal*. They analyzed more than 44 000 hospitalizations for children with asthma, using the Pediatric Health Information System, an administrative database receiving inpatient data from 42 freestanding children’s hospitals. The rate of asthma rehospitalization ranged from 0.5% at 7 days to 17.2% at 365 days. African American patients and those with public insurance had an increased risk of rehospitalization at >60 days. Adolescents, children with complex chronic conditions, and children with a prior-year asthma admission had higher odds of rehospitalization at every time interval. In addition, there was significant hospital variation in rates of hospitalization at each time interval to one year. The rates of readmission at one year were <10.9% for the top 10% of hospitals. If all hospitals had achieved this, more than one-third of rehospitalizations could have been avoided. These results suggest that asthma rehospitalizations probably should be assessed at intervals longer than the standard 30-day period. Studying these rehospitalizations might lead to improvements in asthma care, especially care following discharge.

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Emergency department volumes and “mass events”

— Thomas R. Welch, MD

When it comes to events that can occupy much of a country, sports largely dominate. On a global level, soccer is probably the best example. There have been sporadic reports of the timing of emergency department (ED) visits in regard to sporting events such as the Super Bowl, but soccer tournaments can consume an entire month. How should an institution plan to staff an ED in the course of such a hugely time-consuming mass gathering?

Some fascinating data are provided in the current issue of *The Journal* by Levin et al, based on the 2010 Soccer World Cup in Cape Town, South Africa. During the 31 days of this tournament, there were one-third less pediatric injuries seen in EDs than in the weeks prior or after, and less than the similar period in the previous two years.

Feeding and growth after the Norwood procedure

— Stephen R. Daniels, MD, PhD

Mortality was not affected. The greatest reduction in injury visits occurred during the conduct of individual matches, with a slight spike after they were completed. In addition to providing some insights into the epidemiology of accidental injuries in children, these data may inform staffing patterns for pediatric trauma services in areas in which such events are taking place.

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The Norwood Procedure has dramatically changed the outcome for infants with hypoplastic left heart syndrome. However, this staged procedure is associated with substantial morbidity. Feeding and growth are the more vexing issues for patients with single ventricle physiology as they undergo the process of reconstruction. In this issue of *The Journal*, two studies address this issue. Hill et al report the results of a study designed to evaluate the prevalence of feeding dysfunction in children with single ventricle and to identify associated risk factors. They found that feeding dysfunction is common, occurring in 50% of patients and, when present, is associated with poor growth. The associated risk factors were gastrostomy tube and a single parent household. Lambert et al analyzed data from the Pediatric Heart Network Single Ventricle Reconstruction Trial to evaluate variation of feeding practices and outcome in an attempt to identify best practice. They found substantial variation in feeding practices across centers. Tube feeding was associated with prolonged hospitalization and a greater number of medications at discharge. Infants fed orally had higher weight-for-age than those fed exclusively by tube.

Although tube feeding may be a marker of a sicker infant, it appears that promotion of earlier oral feeding may provide a better long-term outcome. Future research should focus on methods to promote oral feeding in this very high-risk population.

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FM-listening systems improve speech perception in some children with autism

— Sarah S. Long, MD

In a study of 10 selected children with autism and poor speech perception ability, a 6-week trial of an FM-listening device system was performed. The use of the listening system improved discrimination of speech in noise, and 8 of 10 participants continued to be consistent FM-users at study completion. Appraisal score by teachers indicated perceived improvement in listening/comprehension, classroom behavior, and general attentiveness.

With limitations of the study's numbers and methods, as acknowledged by authors, and selection of a specific subpopulation of affected children for device trial, the findings are quite positive. The two main approaches to reducing functional hearing deficit in children with difficulty of listening-in-noise are to improve the quality of signal reaching the child's ear and to train the child to make best use of the signal. This study addresses the first point, which has to be a good place to start.

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Electrographic seizures after status epilepticus

— Robert W. Wilmott, MD

The percentage of children who demonstrate electrographic seizures after convulsive status epilepticus has been unknown. In this issue of *The Journal*, Sánchez Fernández et al from Boston Children's Hospital and Harvard Medical School report the results of a multicenter retrospective study of the clinical and electroencephalographic (EEG) features of 98 children (1 month to 21 years of age; median age 5 years) who underwent continuous EEG monitoring following clinical convulsive status epilepticus. Electrographic seizures were identified in 32 children (33%), and 11 had only electrographic seizures. Fifteen had electrographic status epilepticus. Recurrence of electrographic seizures after convulsive status epilepticus was associated with a diagnosis of epilepsy, and the presence of interictal epileptiform discharges. It was also noted that the children with electrographic seizures had longer stays in the pediatric intensive care unit. These results, therefore, fill a gap in the literature in showing that one-third of children demonstrate electrographic seizures following convulsive status epilepticus and one-third of those have electrographic-only seizures. The data identify risk factors for such seizures.

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