

763

THE CURRICULARIZATION OF MCKUSICK: AN INNOVATION IN MEDICAL EDUCATION. Joann N. Bodurtha, J. Ives Townsend, Virginia K. Proud, Walter E. Nance. (spons. by B. Wolf)

Dept. of Human Genetics, Medical College of Virginia, Richmond, Va. Growing recognition of the urgent need for reform in medical education was underscored by a recent AAMC report which recommended the promotion of self education, problem solving and life long learning. We have implemented an instructional module in human genetics for first year medical students which achieved these and other desirable educational goals. During their second week in medical school each student was assigned a different entry from the 1983 edition of McKusick's Mendelian Inheritance in Man to revise and update in a semi-structured format. The resulting entries were discussed in small sections, reviewed and compiled to provide each student with a compendium of genetic disorders. Instructors found that nearly all of the important principles of Mendelian inheritance could be illustrated with the random sets of entities assigned to each discussion group. Students learned to use the library, gained an appreciation of the importance of genetic disease and were able to master clinical and experimental material with surprising ease. More than half the students spent 11-20 hours on the assignment and reviewed from 6-10 articles in detail. The caliber of the entries was significantly correlated with the time spent on the exercise, but not the number of papers reviewed, prior knowledge of the disease, the frequency with which a dictionary was used or undergraduate exposure to genetics. Student response to the exercise was favorable and raised the question of the extent to which this approach can be generalized to other disciplines.

764

ANOREXIA AND GASTROPARESIS AS A MECHANISM OF REFRACTORY FAILURE TO THRIVE IN INFANCY. John T. Boyle, Jonathan A. Flick, David A. Piccoli. (Sponsored by John B. Watkins). Univ. of Penn. School of Med., Children's Hosp. of Philadelphia, Division of Gastroenterology.

Previous studies have attributed the feeding disorder associated with non-organic FTT as secondary to psychosocial deprivation or chronic malnutrition. We report 8 infants (6M, 2F) first evaluated at an average (AV) age of 18 mo (Range 10-30 mo), all with wt/ht < 5% and AV% expected wt/ht = 78% (nl > 90%). Onset of wt deceleration averaged 5 mo (range 3-12 mo). All were term gestations (5 AGA, 3 SGA). 4/8 had mild to moderate delay in language development. All had at least one GI symptom (7/8 diarrhea, 2/8 regurgitation, 3/8 constipation) from early infancy. All had a history of multiple formula changes and dietary manipulations. Caloric intake averaged 60 kcal/kg/d. Extensive evaluation revealed no evidence of gastrointestinal disease (including 6/6 small bowel biopsies) except: (a) transient elevation in serum alkaline phosphatase in 4/8 (Range 474-4680, nl < 250 U/L), and (b) abnormal gastric emptying measured by milk scintigraphy in 5/7 tested (AV 88% residual at 1 hr, nl < 70%). Psychological evaluation revealed normal maternal-child and caretaker-child interaction except for feeding related behavior. All infants demonstrated a lack of interest or aversion to eating. Therapeutic intervention including nutritional counseling, hospitalization, metoclopramide and overnight NG feedings failed to significantly improve caloric intake during follow-up (Range 5-15 mo). We suggest that a primary feeding disorder may be a mechanism of refractory FTT. Alternatively, multiple dietary changes in early infancy may induce a secondary feeding disorder. Early satiety from 1^o or 2^o delayed gastric emptying may be a component of the disorder.

765

TEACHING RESIDENTS AND PHYSICIANS THEIR RESPONSIBILITIES TO THE COURTS WHEN FUNCTIONING AS AN EXPERT WITNESS. Robert L. Brent, Jefferson Medical College, Department of Pediatrics, Philadelphia, PA

In most instances, unprofessional performances by physician expert witnesses are the result of ignorance rather than greed or amoral behavior; although there are physicians that can be characterized by the latter traits. It is essential that every pediatric residency prepare the residents for the eventuality of entering the courtroom as an expert witness. The characteristics of a quality expert include 1) exemplary scholarship; 2) objectivity and absence of partisanship; 3) adequate preparation; 4) knowledge of courtroom procedure; 5) appropriate relationship with attorneys and expert witnesses; 6) appropriate demeanor; 7) appropriate fees. The latter is of great importance because many physicians attempt to exploit their role as an expert witness, demeaning themselves and the profession. Examples of appropriate and inappropriate performances will be given for each of these characteristics. The information will be drawn from actual depositions or court testimony.

766

OTITIS MEDIA (OM) WITHIN 30 DAYS OF DIAGNOSIS: RECURRENCE OR REINFECTION? Susan Carlin, Colin Marchant, Paul Shurin, Candice Johnson, D. Murdell-Panek, Steven Barenkamp. Case Western Reserve Univ., Cleveland Metropolitan General Hosp., Dept. of Peds., Cleveland, Ohio. Washington Univ., St. Louis Children's Hosp., St. Louis, Missouri.

We performed a prospective study of clinical recurrences (CR) of OM within the first 30 days after diagnosis. The purpose was to identify risk factors for CR and to determine if the CR was a bacteriologic recurrence (same pathogen as the acute episode) or a reinfection (different bacterial species or different strain of the same species). Patients were treated initially with Augmentin, Cefaclor or Trimethoprim-sulfamethoxazole. Tympanocentesis was performed at diagnosis, after 3-5 days of therapy and at the time of CR. *Streptococcus pneumoniae* were classified by capsular serotypes; *Haemophilus influenzae* strains by biotypes and outer membrane protein electrophoresis patterns.

Results: 36/105 patients (34%) developed CR. 29 underwent repeat tympanocentesis. 21/25 patients (84%) had reinfection; 4/25 (16%) were infected with the same pathogen. No pathogen could be identified initially or at CR in 4. Age, sex, race or presence of MEE at the end of therapy did not identify those with CR. Children with CR were more likely to have 3 episodes of OM in the last 6 months (40% vs. 12%, p = .003).

Conclusions: 1) History of recurrent OM is a risk factor for clinical recurrences. 2) Clinical recurrences within 30 days of diagnosis are usually reinfections. Pediatricians should not assume that clinical recurrences after therapy are failures of initial antibiotic therapy.

767

HOUSE STAFF EDUCATION THROUGH COMPUTER ASSISTED MANAGEMENT (CAM) OF RESPIRATORY FAILURE. WA Carlo, L Pacifico, RL Chatburn, AA Fanaroff. CWRU, Cleve, OH.

Despite their generalized availability, acceptance of computers into Neonatal units (NICU) has been slow and their impact on care minimal. To facilitate staff education and standardize ventilator management we adapted an algorithm on mechanical ventilation into a user-friendly basic computer program. To determine its effectiveness we compared incidence of resolution of arterial blood gas (ABG) derangements in 2 groups of neonates with respiratory distress syndrome: 10 infants managed by house staff assisted by consultation with computer (CAM) and 10 infants managed by spontaneous staff actions (Spont) before introduction of computer into NICU. ABG derangements (PaO₂<50 or >80, PaCO₂<35 or >50, or combinations thereof) were assessed and improvement defined by correction of the ABG abnormality following a ventilator change. Staff followed computer recommendations only 48/75 (64%); however, following computer recommendation, ABG improved 46/48 (96%) compared with alternate decisions (19/27, 70%, p<0.005). Overall, ABG improvement occurred more frequently with CAM (65/75, 87%) than with Spont (37/57, 65%, p<0.005). Additionally unnecessary increases in ventilatory settings were observed on 7 occasions with Spont and never with CAM. We conclude that normalization of ABG and subsequent weaning from the ventilator is more effectively accomplished with CAM. This validation that CAM can be of benefit to both the staff and their patients will hasten acceptance of computers into the NICU. A properly applied computer program may assist a large rotating house staff in understanding mechanical ventilation resulting in more effective care.

768

PRESENCE OF RESPIRATORY VIRUSES DURING ACUTE OTITIS MEDIA (AOM). Tasnee Chonmaitree, Virgil M. Howie, Allan A. Truant. University of Texas Medical Branch. Departments of Pediatrics and Pathology, Galveston, Texas.

AOM is generally considered to be a bacterial disease. We studied 71 infants and children (1 mo. to 9 yr.) with AOM for evidence of viral infection. During a 2 year period, middle ear fluids (MEF) were cultured for bacteria and viruses and nasal washings (NW) were cultured for viruses. Seventy-nine pathogens were isolated from MEF of 58 (82%) cases: 27 strains of *H. influenzae*; 23 *S. pneumoniae*; 9 *Neisseria*; 5 influenza virus (infl); 3 rhinovirus (rhino); 3 enterovirus (entero); 3 *S. aureus*; 2 *S. pyogenes*; 2 gram negative bacilli; 1 respiratory syncytial virus (RSV); 1 parainfluenza virus (para). One pathogen was found in MEF of 39 (55%) cases, 2 pathogens in 17 (24%) and 3 pathogens in 2 (3%).

Bact +/Vir +	infl	rhino	entero	RSV	para	+virus/total
Bact.	4	2	3	1	1	11/56
No Bact.	1	1	0	0	0	2/15
Total cases	5	3	3	1	1	13/71

In 10 of 13 cases the virus in MEF was found in NW. Two had the virus (infl, rhino) in both MEF and NW but no bacteria in MEF. An additional 11 cases had 12 viruses in NW, 2 (adeno and para) had no pathogen in MEF. Total of 24 (34%) cases of AOM had viral infection of the upper respiratory tract. Presence of virus in MEF/NW for rhino was 3/3, infl 5/9, para 1/2, entero 1/3, RSV 0/1, adeno 0/1 and CMV 0/3. AOM is often a result of combined viral and bacterial infection although virus alone can cause AOM. Ototropic viruses include rhino, infl, and entero. The relative contribution of viral and bacterial pathogens to the development of AOM requires further study.