Atoms

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THE CHALICE RULE FOR HEAD TRAUMA – PREDICTING WHICH CHILDREN NEED CT SCAN

The development of prediction rules is complicated, involving the derivation of reliable rules, followed by prospective validation in a different group of patients. Rule development is further complicated when there is debate about the appropriate outcome or when the outcome is rare and cost must be considered. For example, there has been a great deal of energy spent on the appropriate diagnostic process for adults with possible deep vein thrombosis (DVT). There is general agreement that DVT, rather than complications of DVT, are the appropriate outcome and since DVT is not rare little work has been done about the cost-effectiveness of these rules. In a paper from Dunning and colleagues from Manchester Royal Infirmary, the authors describe the development of the children's head injury algorithm for the prediction of important clinical events (CHALICE) rule for the prediction of important clinical events for children with head trauma. There aim was to ''derive a sensitive clinical decision rule for the management of children presenting with an acute head injury…'' Numerous consensus statements have been developed based upon limited data that describe which children should have computerised tomography scanning following head trauma. The question is complicated for many reasons. What is the appropriate outcome—is it children who develop intracranial pathology, or those who need neurosurgical intervention? Is the same rule applicable in infants, children and adolescents? How do you balance scanning with hospitalisation and observation? What about the risks of scanning, particularly in infants? Although many children suffer from head trauma, serious head trauma remains rare, and very few children actually undergo neurosurgical intervention. This paper was revised numerous times based upon the peer-reviewed comments of statisticians, intensivists, neurologists and experts in the emergency care of children. Rob Forysth adds a perspective, indicating that validation of the rule is now necessary, and following validation, a discussion of the complex relationship between cost and risk.

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ORGANISING AND ASSESSING SPECIALTY CARE FOR CHILDREN

The paper by Pushparajah and colleagues and the accompanying perspective by John Gibbs highlight one of the most complicated questions facing modern medical systems—which patients should be seen by specialists and who can be cared for by general paediatricians. In these papers, the authors consider the evaluation of children with heart murmurs. Is evaluation by a general paediatrician with special expertise in paediatric cardiology adequate? As demand for specialty services has risen, with an increasingly demanding public, can generalists provide adequate specialty care for certain diseases? I remember my early discussions with Harvey Marcovitch, former Editor in Chief of *ADC* and consultant paediatrician. Harvey seemed to do a bit of everything—cardiology, hematology, oncology, endocrinology, neurology, and gastroenterology. In more recent discussions with Harvey and other consultant paediatricians, they allude to a change in practice for consultant paediatricians, with more concentration in a limited number of specialties. I have always felt that the practice of paediatrics is far more exciting in the UK than the US—consultants and specialists see far more ''disease'' and cost is a real consideration in diagnostic evaluation, resulting in more complicated decision making. As healthcare is reorganised, as pointed out by Gibbs, there is an important emphasis on the assessment of competence. It is equally important to assess the competence of consultant paediatricians who work full-time in one area and generalists who develop expertise in a specific area. As we have learned over the past decade, there is a great deal of variation, and likely deviation from ''best practice,'' for diseases in which care is dominated by specialists—for example, type 1 diabetes or cystic fibrosis. The world of quality assessment is migrating into paediatric specialty services—how does care for children with cystic fibrosis, cardiac disease, or inflammatory bowel disease vary from specialty clinic to specialty clinic?

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THIS MONTH IN FETAL & NEONATAL

- Effective phototherapy for neonatal jaundice is particularly dependent upon the type of delivery system. In a very practical randomised clinical trial from Malaysia, Djokomuljanto and colleagues found that the addition of white curtains hanging from the sides of the phototherapy unit significantly increased the efficacy of phototherapy. ***See page F439***
- In a conversation with Gorm Greisen, a member of our editorial board from Denmark, I was struck by his comment about how uncommon bronchopulmonary dysplasia is in his country. He believes that this is related to their use of continuous positive airway pressure (CPAP) rather than endotracheal intubation in extremely preterm infants. In a report from Hammersmith Hospital, Booth *et al* describe the use of CPAP during the first week after delivery in extremely preterm infants. ***See page F398***
- My experience has been that the first birthday and time of school entrance are important dates for parents with very premature infants. A report from the Netherlands reminds us that very preterm infants and very low birth weight infants are more likely than normal birth weight children to have social and attention problems at the time of school entry. ***See page F423***