Primary survey

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The content of this month's journal reflects two major trends in the specialty of Emergency Medicine. First our specialty is an international one—but while the papers this month come from around the world the content of the articles is relevant to us all, wherever we practice. Second our specialty is a diagnostic one—the majority of the original articles this month are not about treatment but are about prediction of outcome and diagnosis. About time too—if we don't know what we are dealing with then there is very little chance of dealing with it correctly.

Prediction

Our paper of the month this month is from Aaron Bernard and colleagues from Cincinnati. This group looked at the emergency department clinical data for 884 visits by 125 patients with potential sickle cell crises. From these data they constructed a risk scoring system (against 96-hour adverse outcome). This simple system, allocating each of nine historical, clinical and laboratory factors a score of 1 if present, is 86% sensitive if 2 factors are present, compared to physician judgement of 77.2% sensitivity. As would be predicted, higher scores are associated with lower sensitivity and higher specificity. The system will need to be prospectively validated and the clinical usefulness will need to be assessed before widespread adoption can be recommended, but the study shows yet again that decisions that are shrouded in the mysterious cloak of "physician judgement" can be unpicked and laid bare (***see page 635***).

Two papers from Korea continue the prediction theme. Sung-Woo Lee and collaborators from Korea University investigated whether presentation and 4 hour serum lactate *per se* or lactic acidosis is more closely associated with in-hospital mortality in patients presenting with severe sepsis or septic shock (see page 659). In their series of 128 patients the latter seems to perform better. Seung Pill Choi and colleagues from the Catholic University of Korea report a study looking at early CT scan predictors of poor outcome after successful cardiovascular resuscitation from cardiac arrest. In their group of 28 patients they show an interesting highly specific association between low grey matter to white matter density ratio and vegetative state or death (***see page 666***).

Kuang-Yu Hsiao and colleagues from Taiwan looked at the records of 204 patients with traumatic brain injury that were admitted to intensive care (***see page 670***). Their findings that increasing age, Glasgow Coma Scale score of 8 or less and the presence of a fracture of the skull are associated with worse outcome are unsurprising—but it is always useful to see that commonly held beliefs are actually true. Similarly unsurprising results are reported by Vanessa Burch *et al* from Cape Town who looked at the Modified Early Warning Score (MEWS) as a predictor for hospital admission and mortality. They found that admission rates increased significantly with increasing MEWS, and that five physiological variables were independent predictors of admission. Of course there is more to emergency department triage than predicting admission, but this study reinforces the usefulness of the incorporation of physiological measures into any system (***see page 674***).

Katherine Clesham and others from Sheffield have authored the last of the prediction papers in this month's issue. This interesting paper investigates the ability of prehospital ambulance staff to predict which of the patients they are transporting will require admission to hospital. In the 396 cases investigated, the prehospital staff had a sensitivity of 71.7% and a specificity of 77% in predicting actual admission. Somewhat surprisingly (given their training) they were better at predicting admission in non-trauma cases compared to trauma cases—read it and see what it all might mean (***see page 691***).

Diagnosis

Xafis *et al*, from the University Hospital of Berne, report a study into the thorny issue of microhaematuria and urolithiasis. This retrospective study used low dose unenhanced, multidetector CT as the gold standard and found that microhaematuria had a sensitivity of only 67% and a specificity of 58% for urinary tract stones. This is a much lower utility than reported by many previous studies. You should go to and read this study for yourself to decide whether the patients recruited are representative of your own, and what implications, if any, it has for your practice (***see page 640***).

Jennifer Browning and colleagues from the Royal Hospital for Sick Children in Edinburgh report our second interesting diagnostic study this month. Again this deals with a thorny old issue—ultrasonography or CT scanning in blunt abdominal trauma, but is new in that it is focussed on children. In particular this small, retrospective study looks at the utility of paediatric radiologists at assessing abdominal injuries (***see page 645***).

…and finally

After a hot and sticky day in the emergency department, Rick Body was driven to look for the evidence that caused all the fans to be taken away by Infection Control. How much did he find to support this action? Have a look to see where he's placed his BET (***see page 689***).