Secondly, the poor fit obtained by Guignard in his plot of inulin clearance against a Ht/Pcr formula illustrates the limitations of linear regression analysis when applied to obviously non-linear functions. It is apparent from inspection of his figure and similar ones in previous studies that the true relation is curvilinear, although a much better approximation to linearity is achieved if the analysis is confined to values of GFR < 90 ml/min/1.73 m², that is, in the subnormal range where it is of particular value to detect changes in function reliably.

A better fit (in the sense of a higher value for r²) could undoubtedly be obtained for the whole relation using a polynomial regression function, but any resulting increase in numerical precision of predicted GFR would be more than offset by the complexity of the calculations necessary to derive it; the one undoubted merit of the Ht/Pcr relationship—its simplicity—would be lost. The mere fact that the absolute number obtained by the Ht/Pcr formula is higher than the corresponding value for inulin clearance at low levels of renal function is of not the slightest importance providing that the difference is reasonably consistent and that the method is sufficiently sensitive to changes in function. A similar relation is to be expected between inulin clearance and creatinine clearance however the latter is estimated.

In our opinion, most of the disagreement generated by this subject stems from failure to distinguish between GFR as measured in physiological studies where maximum accuracy is required, and 'renal function' as measured in clinical medicine, in which 2 questions are commonly asked: is it normal and has it changed? We reiterate our view that the Ht/Pcr formula can provide adequate answers to these questions in most situations. Where greater accuracy is required or when the estimate derived from Ht/Pcr is equivocal, it is of course appropriate to use one of the numerous more precise methods which have been described.

References


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Which infants should not receive intensive care?

Sir,

In Professor Campbell’s lucid discourse about which infants should not receive intensive care he suggests a cut off weight below which certain treatments, for example intermittent positive pressure ventilation, would not be used until implications and options for the child had been discussed with the parents. Since birthweight is known only after birth, since ventilation of such infants is optimised by directly intubating them in the delivery room, and since parents in these adverse circumstances are often intensely overwrought immediately after birth, I am confused about the practical application of such policy.

Does Professor Campbell suggest withholding ventilation unless and until the parents agree? Does Professor Campbell recommend initiating ventilation, then stopping if parents are willing to take this course? The decision to let live or die is an absolute one; not one conceptually arrived at by wholly numerical predictors. While this notion of a birthweight dead line may be appealing, unfortunately for those of us involved on a daily basis with this process, its practicalities are elusive.

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Professor Campbell comments:

I am grateful to Dr Scanlon for indicating a lack of clarity in my annotation. He expresses scepticism about the practical application of using a 'cut off' weight in determining which infants should not be given intensive care. The decision to withhold intensive care is not usually a snap judgement to be made immediately after birth. Junior doctors who are responsible for resuscitation should treat all infants whatever the weight or gestation age, and their treatment may require intubation and ventilation. Weight is only one of a number of criteria to be used by senior doctors in coming to a considered judgement as to the wisdom of continuing intensive care after discussion with the parents. Where severe fetal abnormality is identified before birth, it may be appropriate for the doctors and parents together to
decide before birth that intensive resuscitative measures should not be used. Perhaps it should be emphasised that all infants are given intensive care if their parents wish it. If an infant weighs under 750 g at the appropriate gestation age (under 26 weeks) intensive care is not recommended. Infants greater than 750 g and 26 weeks gestation are treated vigorously and any decision to withdraw intensive care is determined by subsequent progress. It is likely that these criteria will change in future years just as they have done in the past, but at present we consider that the outcome for these extremely low birthweight infants does not warrant the routine use of intensive care.

Dr De Wachter takes me to task for devaluing the role of ethics committees in making decisions for or against the use of intensive care. I do not wish to belittle the importance of an appropriate hospital committee for reviewing policy and practice and in helping the medical staff to understand the complex issues involved, but I need to be convinced that such a committee can make appropriate decisions in individual cases. I hope that Dr De Wachter will publish his experience of a committee which is able to function in this way.

References


Fifty years ago

Studies of the anaemias of infancy and early childhood

Part V—The haemolytic (erythronoclastic) anaemias of later infancy and childhood: with special reference to the acute haemolytic anaemia of Lederer and the anaemia of von Jeksch

LEONARD G PARSONS AND J C HAWKESLEY (Birmingham)

In a paper published by one of us in 1931 were described 4 cases in which anaemia developed with great suddenness; the children were acutely ill and showed enlargement of the liver and spleen, a severe degree of anaemia with intense marrow reaction, and in some cases a leucocytosis of 20,000 to 40,000 × 10³/mm³. All the children made a rapid, and in some cases a spontaneous recovery. This condition was regarded as due to an intestinal infection because vomiting and abdominal pain or diarrhoea were associated symptoms. Dr Lederer kindly drew our attention to the fact that these cases were examples of a symptom complex of which he had seen 3 examples and which he had described in 1925 as 'a form of acute haemolytic anaemia probably of infectious origin'... The liver was enlarged in 3 cases only: in 2 of these both liver and spleen were enlarged... Bruising or petechiae was present in 3 cases and the urine contained red blood cells in 2 others... Signs of an intense marrow reaction were present... Anisocytosis, poikilocytosis, polychromasia, punctate basophilia were pronounced, and this is the only form of infantile anaemia in our series in which punctation and Cabot's rings have been seen.

Archives of Disease in Childhood 1933; 8: 184–210.

(Were some of these examples of the haemolytic-uraemic syndrome? (Blood urea levels were not estimated in any of the 9 cases.) Leonard Parsons subsequently became professor of Paediatrics in Birmingham and was the first member of the British Paediatric Association to be elected a Fellow of the Royal Society. Philip Evans).