Secondly, the poor fit obtained by Guignard in his plot of inulin clearance against a $Ht/P_{cr}$ 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 relationship is curvilinear, although a much better approximation to linearity is achieved if the analysis is confined to values of GFR $< 90 \text{ml/min/1.73 m}^3$ (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 $r^2$) 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 $Ht/P_{cr}$ relationship—its simplicity—would be lost. The mere fact that the absolute number obtained by the $Ht/P_{cr}$ 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 $Ht/P_{cr}$ formula can provide adequate answers to these questions in most situations. Where greater accuracy is required or when the estimate derived from $Ht/P_{cr}$ 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...
Which infants should not receive intensive care?

John W Scanlon

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