Reviewer's report

Title: Uroflowmetry Nomogram in Children between 7 to 14 years of age

Version: 1 Date: 29 July 2004

Reviewer: Wendy Bower

Reviewer's report:

General
This is a well constructed study providing a useful resource to clinicians in Iran. Two points are bothersome. Firstly that the mean voided volumes, and consequently the mean flow rates, were very low in comparison to expected bladder capacity in normative children. For example Kaefer et al (1997) predict 270 mLs as the expected bladder capacity for 7 year olds and our own data revealed 160ml plus for 6 year old children. If children in this study voided around 145mL at sensation of bladder fulness, do they actually have habitual poor hydration or small bladder capacity?

The second point relates to the possible small bladder capacity reported. The nomograms have an endpoint of 340mL, the expected bladder capacity for a 12 year old as per Kaefer et al. The authors comment that they did not find a decreased maximum flow rate at higher volumes, the inference being that at these volumes the detrusor length-tension curve was ineffectual. I do not think that data of < or = 340mL bladder storage can justify this comment.

Comment re Table 1: it is understood that this is a tabulation of minimum acceptable values, however given that uroflow is known to be unreliable under 100mLs it may be useful to raise the minimum voided volume to 120 or 150mL and recalculate the flow rates concerned.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
Nil

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
Given the obvious difference in voided volumes between this study and other reports of age-expected bladder capacity, the nomogram figures should be marked as population specific i.e. ...flow rates in Iranian boys / girls.

Discretionary Revisions (which the author can choose to ignore)

The comment in the final paragraph about the drinking preferences of Iranian children is a sweeping generalisation. Of more interest and worth greater exploration is the fact that Iranian children withhold voiding until they are at home. Is this in fact possible because they voluntarily restrict fluids? This would go some way toward explaining the small bladder capacities noted in the study. It would be interesting to seek to validate the impression that local children habitually withhold urine when outside the home.
What next?: Accept after discretionary revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

None