



## Correspondence

### Validity of Broselow tape for estimating weight of Indian children

Sir,

I read with interest the study by Shah and Bavdekar<sup>1</sup> on the validity of Broselow tape (BT) for estimating the weight of Indian children. The authors have recommended that BT cannot be used without modifications in Indian children attending public hospitals. The application of 10 per cent correction factor to the Broselow-estimated weight increases the accuracy of the tape to over 60 per cent<sup>1</sup>. I presume that the clinical implication of that finding is questionable in the light of the following limitation. With the worldwide increase in the prevalence of paediatric obesity, there are increasing concerns on the precision of BT in estimating the weight of obese children. To my knowledge, paediatric obesity is an ongoing health problem in India. The recently published data pointed out that the overweight and obesity rates in children and adolescents were increasing not only among the higher socio-economic groups but also in the lower income groups<sup>2</sup>. The pooled data after 2010 estimated a combined prevalence of 19.3 per cent of childhood overweight and obesity which was a significant increase from the earlier prevalence of 16.3 per cent reported in 2001-2005<sup>2</sup>. Hence, it would be a distressing problem in employing BT to estimate the weight of the critically ill obese Indian children in the emergency units who might need exact doses of emergency drugs and fixed equipment sizing. The following two points might help solving that distressing state. First, there is a need to develop an adjustment equation that could improve the BT weight estimate in obese paediatric patients similar to that accomplished in certain paediatric populations<sup>3</sup>. Second, the paediatric advanced weight prediction in the emergency room tape might be considered a better alternative to BT as it has been found to be statistically superior to BT in the estimating the weight of obese children<sup>4</sup>.

**Conflicts of Interest:** None.

**Mahmood Dhahir Al-Mendalawi**

Department of Paediatrics, Al-Kindy College of  
Medicine, University of Baghdad, Baghdad, Iraq  
mdalmendalawi@yahoo.com

Received August 5, 2017

#### References

1. Shah V, Bavdekar SB. Validity of Broselow tape for estimating weight of Indian children. *Indian J Med Res* 2017; 145 : 339-46.
2. Ranjani H, Mehreen TS, Pradeepa R, Anjana RM, Garg R, Anand K, *et al.* Epidemiology of childhood overweight & obesity in India: A systematic review. *Indian J Med Res* 2016; 143 : 160-74.
3. Tanner D, Negaard A, Huang R, Evans N, Hennes H. A prospective evaluation of the accuracy of weight estimation using the Broselow tape in overweight and obese pediatric patients in the emergency department. *Pediatr Emerg Care* 2017; 33 : 675-8.
4. Chavez H, Peterson RE, Lo K, Arel M. Weight estimation in an inner-city pediatric ED: The effect of obesity. *Am J Emerg Med* 2015; 33 : 1364-7.