Letters to the Editor

Pulmonary Function Tests in Normal Indian Children and Changes in Respiratory Disorders

I read with interest, the recent article on this topic(l) and have the following comments to offer:

1. The sample size of 95 children appears inadequate to establish normal values of pulmonary function tests of both sexes in age group of 8 to 13 yrs. Further, the grouping of height by 20 cm interval is too wide for average predicted values.

2. Table I has error in mean female FEV_1/FVC ratio. FEV_1/FVC ratio tends to decrease with age in normal children. This study has observed the contrary *(Table II),* with no explanation from authors. In Group C values for FVC and FEV_1, are shown in decimals which is not possible to measure. In *Table III,* FVC is reduced significantly even in mild asthma which usually is not the case. In *Tables III & IV* the reduction in FVC values may be due to premature stopping of FVC effort which is the commonest error in pediatric pulmonary function testing and may affect FVC and FEV_1/FVC ratios. Also, in *Table IV* PEFR values increase with increased severity of asthma, It should be the other way round.

3. Authors have not reported on reproducibility of values and if the test confirms to the criteria for acceptability (2).

4. There is no indication for pulmonary function testing in radiologically confirmed cases of pneumonia and empyema. The test is neither diagnostic nor has immediate prognostic value.

5. PEFR as a single reading has poor reliability to diagnose obstructive lesions. Its usefulness is proved in daily monitoring of asthma when multiple daily estimates are graphically recorded.

6. Authors' attempts to use FEV and FEV_1/FVC ratio to diagnose restrictive disorder in asthma or pneumonia or empyema are poorly supported by this data. For diagnosing restrictive disorder, at least flow volume loop, measuring both inspiratory and expiratory parameters should be carried out. Ideally TLC and RV measurements are must.

7. Authors have not presented follow up measurements to support their claim of monitoring severity of disease, response to therapy and their perdictiveness.

8. Can the authors explain how presence of pleural thickening, lung collapse and chest wall deformity can produce early obstructive changes? These factors usually produce restrictive and not obstructive changes.

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REFERENCES

1. Srivastava A, Kapoor RK, Misra PK, Srivastava KL, Thakur S, Shukla N. Pulmonary function tests in normal Indian children and changes in respiratory disorders. Indian Pediatr, 1995, 32: 629-634.

2. Greg R. Manual of Pulmonary Function Testing, 4th edn. St. Louis, CV Mosby Co, 1986, pp 220-227.