Patients aged from 2 to 96 months
46% were boys with mean age of 39.1 ± 26.4 months and 54% were girls with mean age of 49.1 ± 25.6 months

An increase in airway volume from the subglottic to the cricoid to the tracheal levels was observed (Tables 1, 2).

Shape and volume of the airway was calculated using 3 mm slices of the airway column at the level of the subglottis, cricoid, and trachea.

Hypothesis - 3D shape of the airway is not funnel-shaped as originally described, but rather cylindrical-ellipsoid.

Recent studies using advanced imaging modalities including computed tomography (CT) and magnetic resonance imaging (MRI) have demonstrated that pediatric airway is elliptical in cross-section with the narrowest dimensions in the subglottic regions and not funnel-shaped as described previously.1,4

Aim - To use CT-based measurements from a sample population and find anatomical correlates of three key reference points in the pediatric upper airway (subglottis, cricoid, and trachea) to better define the shape and configuration of the upper airway.

Shape and volume of the airway was calculated using 3 mm slices of the airway column at the level of the subglottis, cricoid, and trachea.

Hypothesis - 3D shape of the airway is not funnel-shaped as originally described, but rather cylindrical-ellipsoid.

Three-dimensional imaging of airway may provide better understanding of the pediatric airway which may be useful for development of more anatomically friendly endotracheal tubes.

The age-old notion of funnel-shaped pediatric airway has been challenged recently.

Our study along with others supports the hypothesis that cricoid region is not the narrowest part of the airway in children.

Our data supports other previous studies showing that the airway is not conical and that the narrowest portion is not at the cricoid region.

Three-dimensional imaging of airway may provide better understanding of the pediatric airway which may be useful for development of more anatomically friendly endotracheal tubes.

References