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Title: Prevalence of tracheobronchomalacia in young children with cystic fibrosis

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Body: Tracheobronchomalacia (TBM) is a commonly diagnosed condition with incidence in general population ranging between 1 in 1400 to 1 in 2100 children. In a recent study of adults with cystic fibrosis (CF) by using multi detector CT scans a high prevalence of 29% was reported. Aim: To study the prevalence of tracheobronchomalacia in children with CF. Methods: A prospective observational study was done in Princess Margaret Hospital Perth, Australia from Jan 2011 to Dec 2011. Bronchoscopy findings recorded by clinician were collected in children undergoing CT chest and bronchoalveolar lavage as part of a surveillance programme (ARESTCF) in children with CF 6 years and below. A subjective visual estimation of 50% reduction in cross sectional area was used for defining TBM during breathing efforts. Results: A total of 72 children were studied over 1 year. A prevalence rate of 13.9% was found in the age group studied. Highest prevalence was found during first 2 years (22.7%).

	No.of Children(%)	No.of Children(%)	No.of Children(%)	No.of Children(%)
Age group	0-2 years	2-4 years	4-7 years	Total
TBM present	5(22.7)	4(15.4)	1(4.2)	10(13.9)
TBM absent	14(63.7)	22(84.6)	22(91.6)	58(80.5)
Not observed	3(13.6)	0(0)	1(4.2)	4(5.6)
Total	22(100)	26(100)	24(100)	72(100)

Limitations: prevalence could have been underestimated as spontaneous breathing was not observed in some children due to anaesthetic factors. As technique used was visual estimation there is a potential for observer bias. Conclusions: A high prevalence of tracheo broncho malacia was found in young children with CF. There is a need for further studies to understand the significance of tracheomalacia in CF.

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