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Title: Congenital tracheal diverticle with delayed symptoms

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Body: We discuss a case of a girl who presented at the age of 10 years with atypical musical wheezing during forced breathing. She had positive sensitization to pollens, house dust mites and cat and was treated for allergy and mild asthma with budesonide and antihistamines. As the wheezing was not typical for asthma, she underwent further diagnostics. Spirometry was normal, bronchoscopy and imaging found a communicating tracheal diverticle of the size 17 x 10 x 8 mm. As the girl was otherwise asymptomatic, we have opted for a conservative management. Wheezing disappeared and the patient was completely asymptomatic until 18 years of age when she started to suffer from expiratory wheezing and dyspnea during exercise. Spirometry revealed obstruction of the large airways during expiration. CT confirmed the diverticle of the same size and shape as described before. A wide communication with trachea was described. On bronchoscopy the orifice of the diverticle was found to be closing as a valve with air trapping in the diverticle during forced breathing and coughing with enlargement of the diverticle and bulging of the posterior wall of the trachea. During coughing and forced breathing the tracheal lumen was almost closing. The diverticle was removed by thoracic surgeon from the neck approach and the 5 mm wide orifice closed using part of the diverticle wall. Histology confirmed normal tracheal epithelium. Since the surgery the girl is completely symptom free. This case shows a possible difference in imaging and bronchoscopy, especially in breathing related variable conditions. Supported by the project (Ministry of Health) for conceptual development of research organization 00064203 (University Hospital Motol, Prague, Czech Republic).