Use of a portable continuous positive airway pressure (CPAP) device can augment exercise performance in tracheobronchomalacia, according to research published online March 16 in the American Journal of Respiratory and Critical Care Medicine.

Maxime Patout, M.D., from Guy's & St. Thomas' NHS Foundation Trust in London, and colleagues describe the use of a lightweight portable battery-powered positive airway device with nasal pillows interface to augment exercise performance in a 62-year-old male patient recently diagnosed with tracheobronchomalacia. Three six-minute walk tests (6-MWTs) were performed: during self-ventilation, with a portable CPAP at a set pressure of 4cmH20, and with a portable CPAP at a set pressure of 10cmH20.

The authors found that the patient achieved a walking distance of 60 m on the first 6-MWT performed during self-ventilation and 100 m on the second 6-MWT (4cmH20). On the third 6-MWT (10cmH20), the patient achieved a walking distance of 100 m, but terminated the test at four minutes due to severe expiratory dyspnea.

"Portable CPAP could be a safe therapeutic option for patients with dyspnea and exercise limitation with tracheobronchomalacia but has to be validated by further studies assessing both clinical response and optimal pressure settings," the authors write.

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