

Cardiopulmonary effects following endoscopic thoracic sympathectomy for primary hyperhidrosis

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Abstract

Introduction

Endoscopic thoracic sympathectomy (ETS) is performed for the treatment of primary hyperhidrosis (PH). The second and third sympathetic thoracic ganglions excised in ETS also innervate the heart and lung.

Objective

In the present work we studied the cardiopulmonary effects of ETS in a group of patients with PH.

Methods

We performed a prospective study in 38 patients with severe PH. Pulmonary function, echocardiographic assessment of left ventricular function and myocardial contractility and maximal, symptom-limited, incremental exercise tests were evaluated 2 weeks before, and 6 months after ETS. Data were analysed with the paired t-test. Differences were considered significant when $p \ll 0.05$.

Results

In pulmonary function tests, we found a statistically significant decrease forced expiratory flow in small airways and an increase of residual volume, a significant decrease in heart rate and ejection fraction, a significant decrease of 'rest' and 'peak' heart rate, and a significant increase of oxygen pulse (O₂ pulse) and oxygen peak uptake (VO₂ peak) after ETS ($p \ll 0.05$).

Conclusions

These cardiopulmonary effects observed 6 months after ETS in the treatment of patients with PH are all in normal ranges and are not relevant in cardiopulmonary function. We concluded that ETS in patients with PH is a safe procedure. Patients must be informed about these cardiopulmonary effects before the operation.

Keywords

Primary hyperhidrosis, Endoscopic thoracic sympathectomy, Autonomous nervous system, Prospective study