



Thoracic Aortic Injury Due to Thoracoscopic Sympathectomy: A Case Report

Torakoskopik Sempatektomiye Bağlı Torasik Aort Yaralanması

Aortic Injury Due to Sympathectomy

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Öz

Torakoskopik sempatektomi palmar ve aksiller hiperhidrozun tedavisinde kullanılan bir yöntemdir. Bu teknik daha az ağrıya ve erken işe dönmeye olanak sağlar. 39 yaşında erkek hasta palmar ve aksiller hiperhidroz ile hastaneye başvurdu. Hastamıza çift taraflı torakoskopik sempatektomi uyguladık. Aort yaralanmasına bağlı masif hemotoraks gelişti ve intraoperatif tedavi edildi.

Anahtar Kelimeler

Aort Yaralanması; Torakoskopik Sempatektomi; Hemotoraks

Abstract

Thoracoscopic sympathectomy is a procedure for the treatment of palmar and axillary hyperhidrosis. This technique offers less pain and an earlier return to work than other surgical treatments. A 39-year-old male was admitted to hospital with palmar and axillary hyperhidrosis. We performed thoracoscopic sympathectomy bilaterally. Massive haemothorax due to aortic injury occurred and was treated intraoperatively.

Keywords

Aortic Injury; Thoracoscopic Sympathectomy; Haemothorax

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Introduction

Hyperhidrosis is a common disorder characterized by abnormally increased sweating that affects many people, with a prevalence of about 0.5%. This condition is associated with psychological, emotional, and social status. Video-assisted thoracoscopic sympathectomy is a new procedure for the treatment of palmar and axillary hyperhidrosis. This technique has become popular because of its low morbidity and mortality rates, and the benefits that minimally invasive surgery offers to patients [1]. The most common side effect is compensatory hyperhidrosis and major complications are rare. We present a male patient with palmar and axillary hyperhidrosis who experienced an aortic injury during the thoracoscopic sympathectomy operation.

Case Report

A 39-year-old male patient was admitted to our hospital with palmar and axillary hyperhidrosis. His medical history included a coronary angiography performed due to chest pain 4 years earlier and showed no abnormalities. A thoracoscopic right T3-T4 sympathectomy was performed with two 5mm incisions over the axillary hairline and a left T3-T4 sympathectomy was performed subsequently in Semi-Fowler's position under general anesthesia. The patient woke up often during the surgery. Approximately 2 mm of injury due to cauterization with the hook occurred in the descending aorta at the T4 level and bleeding occurred during the left sympathectomy. Anterolateral thoracotomy was immediately performed. A total of 2000cc of hematoxylin and blood drained. The aorta was explored and repaired with 4/0 prolene suture. Three suspensions of erythrocytes were transfused during the surgery and the patient was extubated in the operation room. He stayed in the intensive care unit for two days. A thorax CT performed during his hospitalization did not show any other aortic injury. He was discharged after a 5-day hospital stay.

Discussion

Most people do not consider hyperhidrosis a disease, but emotional palmar-axillary wetness affects lives both socially and professionally. Although the pathophysiology is unclear, it is believed to be caused by hyper-stimulation or over-activity of the sympathetic nervous system that passes through the upper thoracic ganglia [2]. There are several forms of treatment for hyperhidrosis. Medical treatment includes anti-perspirants, anti-cholinergic drugs, iontophoresis, and botulinum toxin injections. Local excision of the sweat glands and thoracoscopic sympathectomy are the surgical treatment options. Endoscopic transthoracic sympathectomy is a minimally invasive procedure with several advantages over open surgery in the treatment of palmar and axillary hyperhidrosis [3]. Different surgical techniques can be used for the endoscopic transthoracic sympathectomy such as ablation, resection, and interrupting the thoracic sympathetic chain by clips. In a study by Garcia and Espana, intervention on the T3-4 ganglia is identified as the most successful method for combined palmar and plantar hyperhidrosis [4]. We also prefer this approach for palmar and plantar hyperhidrosis because of the high rate of patient satisfaction. In our experience, orotracheal intubation with a double-lumen endotracheal tube is the best choice for intra-operative venti-

lation. The surgeon needs adequate and continuous relaxation to prevent injuries during the surgery. The most common side effect of this method is compensatory sweating due to thermoregulatory mechanisms [5]. Pneumothorax, haemothorax, chylothorax, pleural effusion, lung injury, Horner's Syndrome, nasal obstruction, rhinitis, wound infection, and intercostal neuralgia may be seen intra- and peri-operatively. Cameron has reported a case of subclavian artery injury that required 34 units of blood transfusion [6]. In a prospective study by Dominique, one case with a tear of the subclavian artery and two cases of chylothoraces resolved without sequelae [7]. Patients should clearly be warned of the side-effects and complications of thoracoscopic sympathectomy before surgery.

Conclusion

Our case is the first massive injury case during thoracoscopic sympathectomy in the literature. Appropriate patient selection and adequate anesthesia management are important to avoid complications of hyperhidrosis.

Competing interests

The authors declare that they have no competing interests.

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