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Case Report / Vaka Sunumu

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Concurrent surgical treatment in Raynaud's phenomenon associated with pectus excavatum

Raynaud fenomeni ve pektus ekskavatum birlikteliğinde eşzamanlı cerrahi tedavi

Sami KARAPOLAT, Mustafa Esat YAMAÇ, Atila TÜRKYILMAZ, Celal TEKİNBAŞ

ABSTRACT

Concomitance of Raynaud's phenomenon and pectus excavatum is a rare condition. A 19-year-old male patient diagnosed with Raynaud's phenomenon presented to our clinic, stating that there was an increase in the severity of his complaints. Physical examination revealed thinning of the skin on both hands that was considered as trophic disorder and pectus excavatum. Patient underwent, in the same session, bilateral endoscopic thoracic sympathectomy (T2-T3) and Nuss procedure. At 6-month follow-up, the patient was asymptomatic with regard to both diseases. Concomitance of Raynaud's phenomenon and pectus excavatum can be successfully treated by thoracoscopic interventions in the same session.

Keywords: *Raynaud's phenomenon, pectus excavatum, thoracoscopy, surgery*

ÖZ

Raynaud fenomeni ve pektus ekskavatum birlikteliği oldukça nadir görülebilecek bir durumdur. Raynaud fenomeni tanısı olan 19 yaşında erkek olgu yakınmalarının şiddetinde artış olması nedeni ile kliniğimize başvurdu. Fizik muayenede her iki elde trofik bozukluk lehine yorumlanan cilt incelmesi ve pektus ekskavatum belirlendi. Olguya aynı seansta öncelikle bilateral endoskopik torakal sempatektomi (T2-T3) ve sonrasında Nuss yöntemi uygulandı. Olgu 6 aylık klinik takibin sonunda her iki hastalık açısından asemptomatiktir. Raynaud hastalığı ve pektus ekskavatum birlikteliği aynı seansta yapılan torakoskopik girişimlerle başarılı bir şekilde tedavi edilebilir.

Anahtar kelimeler: *Raynaud fenomeni, pektus ekskavatum, torakoskopi, cerrahi*

INTRODUCTION

Raynaud's phenomenon (RP) is a disorder of unknown origin that affects predominantly the upper extremities and it is characterized by cyanosis and hyperemia due to vasospasm of the digital arteries[1]. Pectus excavatum (PE) is a congenital anterior chest wall deformity, occurring in one in 300-400 live births, which manifests itself with depression of the sternum and costal cartilages[2]. To the best of our knowledge, a case of both clinical conditions occurring concomitantly does not exist in the literature.

In this study, we aimed to present a patient with RP and PE and discuss the case in terms of the process of diagnosis and surgical treatment of both conditions in the same session.

CASE REPORT

A 19-year-old male patient presented to our clinic with pain, hyperemia, and cyanosis of both hands caused especially by cold and emotional stress. History of the patient revealed that he was diagnosed with RP and was on nifedipine, pentoxifylline and acetyl salicylic acid for 3 years and that the severity and frequency of the symptoms intensified over the past couple of months. Physical examination showed thinning of the skin was considered as trophic disorder on both hands and moderate PE. Pectus index of the patient who was non-smoker and did not have any pathology as detected by chest x-ray was 3.7.

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Department of Chest Surgery, Karadeniz Technical University, Trabzon, Turkey
Yazışma adresi: Sami Karapolat, Department of Chest Surgery, Karadeniz Technical University, Trabzon, Turkey
e-mail: samikarapolat@yahoo.com

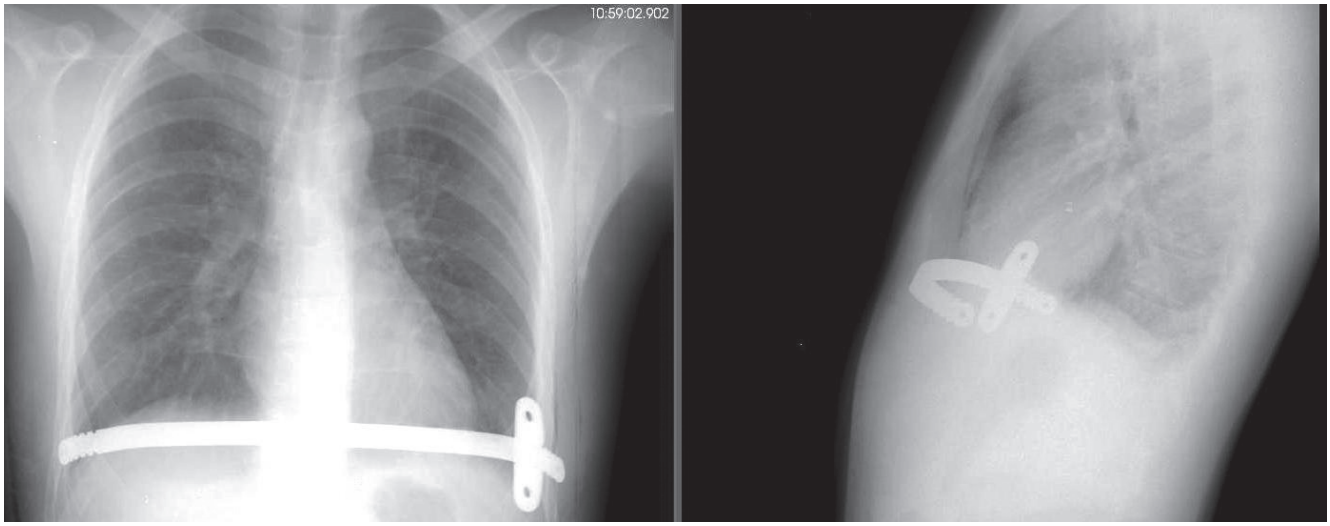

Figure 1. Postoperative posteroanterior-lateral chest x-ray of the case.

Patient underwent surgery under general anesthesia and had, initially, bilateral endoscopic thoracic sympathectomy (T2-T3) with single port approach, followed by Nuss procedure using 11.5 nickel-steel alloy bar in the same session. In operation, we prefer same incision for both interventions (Figure 1). No complication was observed in the postoperative period and the patient was discharged on day 3. The patient was asymptomatic at 6-month follow-up regarding both RP and PE and is no longer on medical treatment for RP.

DISCUSSION

This case showed that a thorough physical and radiological examination of the thorax carried out before endoscopic thoracic sympathectomy[3], which is an advanced therapeutic approach in serious RP patients who experience frequent bouts and have trophic changes due to insufficient treatment can prevent complications during surgery by allowing identification of deformities such as PE. Further, identification of this co-existence enabled concurrent utilization of thoracoscopic surgical treatments for RP and PE.

In patients undergoing thoracoscopic interventions, a detailed history should be taken and a thorough examination of the thorax and lungs should be performed in the preoperative period to detect tuberculosis, bronchiectasis, obstructive lung diseases and chest wall deformities and previous operations, if there is any. Considering that at least 100-200 mL of space is needed within the hemithorax in order to have a successful thoracoscopic intervention[4], identification of patients with pleural adhesions would enable prevention of parenchymal damage during surgery by letting the surgeon be aware and exercise caution or opt for open surgery. In this patient, PE was diagnosed by physical examination and surgery was planned due to the pectus index determined on chest x-ray was over 3.25[5].

Even though thoracoscopic surgical methods are less invasive and offer more comfort in the postoperative period, they require general anesthesia and although rarely they might result in complications. In the present case, two different conditions being treated thoracoscopically in the same session which eliminated the need for a second surgery, reduced the hospitalization period and, therefore, resulted in a cost-effective outcome.

In conclusion, concomitance of RP and PE is a very rare condition and patients can benefit from thoracoscopic interventions performed in the same session.

Conflict of interest: The authors have declared that no conflict of interest exists.

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