Unilateral lomber hiperhidrozisde sempatik radyofrekans nöroliz: olgu sunumu

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ÖZET

Hiperhidrozisli hastalar sıklıkla fiziksel, sosyal ve mental rahatsızlıklar yaşarlar ve sıklıkla bu rahatsızlıklar konservatif yöntemlerle yeteri kadar tedavi edilemezler. Yeni bir perkutan sempatektomi yaklaşımı olan radyofrekans ile denervasyonun daha uzun etki süresi oluşturduğu ve daha az sıklıkla postsempatik nöraljiye neden olduğu düşünülmektedir. Bu yazı sağ tek taraflı lomber hiperhidrozisli, 35 yaşında erkek hastada sempatik radyofrekans (RF) nöroliz deneyimimizi bildirmektedir.

Skopi yardımı ile lomber omurun lokalize edilmesinden sonra, L2-5 vertebralar seviyesine lokal anestezik ile, tanısal amaçlı sempatik blok uygulandı. Uygulamanın etkinliği bilateral ayak cildi ısısının ölçümü ile monitörize edildi. İlk sempatik ganglion bloğu ile elde edilen klinik etki 1 hafta boyunca devam etti ve sonrasında aynı seviyeden lomber sempatik gangliona, RF nöroliz, daha uzun bir etki süresi için, uygulandı. İşlem 30 dakikada tamamlandı ve hasta işlemden sonra 2 saat içinde taburcu edildi. Hiperhidrozis işlemden sonra geriledi ve postsempatektomik nöralji veya seksüel disfonksiyon gelişmedi. Takiplerde birinci ayda hasta lomber hiperhidrozisinde gerileme elde etti ve sonuçtan memnundu.

Sonuç olarak lokalize hiperhidrozisli hastalarda aşırı terlemeyi rahatlatmak için, lomber sempatik ganglionların RF nörolizinin, minimal invaziv özelliğe sahip, güvenli ve etkin bir palyatif girişim olduğunu düşünmekteyiz.

Anahtar kelimeler: Lomber hiperhidrozis, unilateral, nöroliz, sempatik radyofrekans; komplikasyon.

SUMMARY

Sympathetic radiofrequency neurolysis for unilateral lumbar hyperhidrosis: a case report

Patients with hyperhidrosis suffer from physical, social and mental discomfort which often cannot be treated sufficiently using conservative measures. A new percutaneous approach to sympathectomy using radiofrequency denervation has seemed to offer longer duration of action and less incidence of post sympathetic neuralgia. This article reports the authors' experience with sympathetic RF neurolysis in a 35 year old male with right unilateral lumbar hyperhidrosis.

Under scopy guided localization of the lumbar spine sympathetic blockade with local anesthetics to L2-5 vertebral levels were performed as a diagnostic block. Lesion effectiveness is monitored by bilateral feet skin t emperature measurement. Clinical effects produced by the first sympathetic ganglion block were sustained for 1 week and then RF neurolysis of lumbar sympathetic ganglion was performed to the same levels for a longer effect. The procedure was accomplished within 30 minutes and the patient was discharged within 2 hours after the procedure. Hyperhidrosis was relieved after the procedure and there were no postsympathectomy neuralgia and sexual dysfunction. The patient obtained improvement of lumbar hyperhidrosis at his first month of follow-up and was satisfied with the outcome.

In conclusion, RF neurolysis of lumbar sympathetic ganglions is a safe and effective palliative procedure with minimal invasiveness for relieving excessive sweat secretion in patients with localized hyperhidrosis.

Key words: *Lumbar hyperhidrosis, unilateral, neurolysis, sympathetic radiofrequency; complication.*

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Introduction

Sweating is an important mechanism in the regulation of a constant body temperature. Hyperhidrosis is defined as an excess of sweating beyond the amount required to return elevated body temperature to normal (Kreyden et al., 2001). Excessive sweating can be focal at localized areas or generalized over the entire body (Böni, 2002). Localized unilateral hyperhidrosis (LUH) is a rare disorder of unknown origin (Kreyden et al., 2001). Patients with hyperhidrosis suffer from physical, social and mental discomfort which often cannot be treated sufficiently using conservative measures. However, these treatments generally maintain transient dryness. Permanent management could be achieved through invasive techniques like sympathectomy. It is the treatment of choice for primary hyperhidrosis. A new percutaneous approach to sympathectomy using radiofrequency (RF) denervation, appears to offer longer duration of action and less incidence of post sympathetic neuralgia (Wilkinson et al., 1996).

Case Report

This article reports a healthy 35-year-old male with idiopathic localized unilateral hyperhidrosis on the right lumbar area of the back. In history, the patient says that sweating is continuous and nonresponsive to conventional therapy. Family and personal history were otherwise uneventful. The patient could not identify any trigger for sweating episodes other than increased environmental temperature. Physical examination revealed severe sweating on the right lower lumbar region of the back. Results of laboratory tests were normal. A right sided lomber sympathetic RF neurolysis was then planned for the management. Under fluoroscopy guided localization of the lumbar spine, sympathetic blockade with local anesthetics (bupivacaine 0.125% 10 ml to every level, total 40 ml) and steroid (20 mg of dexametazon to every level, total 40 mg) to L2-5 vertebral levels were performed as a diagnostic lomber symphatetic block. Lesion sites are targeted by C-arm fluoroscopy with an oblique position approximately 15-20 degrees using tunneled vision. To get an oblique view of the lumbar spine, the image intensifier was rotated away from the patient until the vertebral transverse process was hidden by the vertebral body. Test solutions were administered to the anterolateral segments of the vertebral bodies of L2-L5. Lesion effectiveness was monitored by bilateral feet skin temperature measurement. Clinical effects produced by the diagnostic sympathetic ganglion block were sustained for 1 week and then RF neurolysis of lumbar sympathetic ganglion was performed to the same levels for a longer effect. Three 18-gauge radiofrequency TC needle electrodes (Neurotherm) were used at 80 oC during 90 seconds. A series of four lesions were rostrocaudally made at each of the ganglion sites, selected in an attempt to destroy the entire fusiform ganglion. Lesion sites were targeted by C-arm fluoroscopy and electrical stimulation, which produces a threshold of sensory awareness of > 50 Hz at 1.0 Volt. Motor stimulation was performed at 2 Hz at 3 Volts. Lesion effectiveness was monitored by bilateral feet skin temperature measurement and dryness of the lumbar region of the back. The procedure was accomplished within 30 minutes and the patient was discharged within 2 hours after the procedure. Hyperhidrosis was relieved after the procedure and there were no postsympathectomy neuralgia and sexual dysfunction on the first week after the procedure. The patient obtained improvement of lumbar hyperhidrosis at his first month of follow-up and was satisfied with the outcome.

Discussion

Localized unilateral hyperhidrosis is a rare but well-defined special form of localized hyperhidrosis with unknown pathogenesis that occurs in otherwise healthy individuals (Boyvat et al., 1999). In some reported cases LUH was attributed to neurologic factors like organic diseases of the nervous system or underlying tumors (Falace et al., 2007; Cheshire et al., 2007; Kreyden et al., 2001; Andersen et al., 1992). In such circumstances where hyperhidrosis is nonidiopathic, regional distribution of the disorder is extensive. In contrast, our patient had idiopathic disease with a limited affected area.

Various treatments are available for idiopathic hyperhidrosis, including local treatment with aluminium (hydro)chloride, local resection of sweat glands, iontophoresis, botulinum toxin application, and endoscopic sympathectomy (Mijnhout et al. 2006; Kreyden et al. 2001). Topical or systemic therapies may be helpful for patients having mild disease. Invasive surgical options, although often effective, are limited due to their possible complications. Different forms of sympathectomy for hyperhidrosis have been performed for more

than 80 years. Upper thoracic sympathetic chain neurolysis with a combination of phenol 8%, glycerine 20% and saline under CT guidance is defined as a safe procedure, having lower incidence of complications and good results at 2 years follow-up by Romano et al . for palmar and axillary hyperhidrosis (Romano et al. 2002). In another study, needlescopic thoracic sympathectomy for palmar hyperhidrosis is defined by Wei et al. (Wei et al., 2006). Also, endoscopic thoracic sympathectomy is a surgical technique defined for hyperhidrosis and the incidence of complication is not low (Horner's syndrome) (Sciuchetti et al., 2006). In the present case, sympathetic RF neurolysis can be defined as a new therapeutic modality for this disorder and can be a safe alternative for currently used therapies.

For the optimal management of idiopathic LUH, previously used therapeutic approaches have not shown regular effectiveness due to their possible redundant adverse effects and invasive natures to be a golden standard for the treatment of this entity. Thus, RF neurolysis of lumbar sympathetic trunk may be considered as a safe and effective palliative procedure for patients whose symptoms can not be controlled with conservative measures. Consequently, in our case this minimally invasive procedure has improved patient's quality of life by ceasing symptoms in the lack of procedure related complications.

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