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Original article

Effectiveness of oxybutynin for treatment of hyperhidrosis in overweight and obese patients☆

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ABSTRACT

Objective: Until the present moment, the lack of efficient therapeutic options available for hyperhidrosis treatment in obese patients has left this population without prospect of clinical or quality of life (QOL) improvements. Outcomes of oxybutynin treatment for overweight and obese patients with hyperhidrosis are unknown. This study aims to investigate the results related to clinical and QOL improvements in this specific population, submitted to a 12-week protocol treatment with oxybutynin.

Methods: 559 patients with palmar and axillary hyperhidrosis, routinely followed in this service, were divided into the groups, according to their body mass index (BMI) (< 25 kg/m^2; 25 < BMI < 30 kg/m^2, > 30 kg/m^2). Improvements in QOL and in the level of hyperhidrosis were analyzed after 12 weeks of protocol treatment with oxybutynin. These parameters were investigated using a scoring system based on a scientifically validated clinical questionnaire, applied before and after treatment.

Results: 67.8% of the overweight sample group and 63% of the obese patients presented "partial" or "great" improvement in the level of hyperhidrosis. Over 65% of patients demonstrated improvement in QOL ("much better" or "slightly better") for all three groups, with no statistical difference between them. The only adverse event associated with oxybutynin was dry mouth, observed in 63.0% of the patients.

Conclusion: Overweight and obese patients with palmar or axillary hyperhidrosis present significant improvement in QOL after treatment with oxybutynin, and the results are comparable to those of normal weight individuals.

Eficácia da oxibutina no tratamento de hiperidrose em pacientes com sobrepeso e obesos

Palavras-chave:
Hiperidrose

RESUMO

Objetivo: A falta de alternativas terapêuticas para o tratamento de pacientes obesos com hiperidrose deixa essa população sem perspectiva de melhorar suas condições clínicas e

☆ Study conducted at Hospital Israelita Albert Einstein and Hospital das Clínicas, Universidade de São Paulo, São Paulo, SP, Brazil.

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Obesidade

qualidade de vida. Resultados do tratamento com oxibutinina especificamente em pacientes com sobrepeso ou obesidade são desconhecidos até o presente momento. Este estudo tem como objetivo investigar os resultados relacionados à melhora clínica e qualidade de vida dessa população, após um protocolo de tratamento de 12 semanas com oxibutinina.

Métodos: 559 pacientes com hiperidrose palmar e axilar, foram divididos em três grupos, de acordo com seu índice de massa corporal (IMC) (< 25 kg/m^2; 25 < IMC < 30 kg/m^2, > 30 kg/m^2). Dados sobre evolução na qualidade de vida e nível de hiperidrose foram avaliados com base em um questionário validado cientificamente, aplicado antes e após o tratamento com oxibutinina.

Resultados: 67.8% dos pacientes com sobrepeso e 63% dos obesos apresentaram melhora clínica "grande" ou "parcial" no nível da hiperidrose. Mais de 65% dos pacientes relataram melhora na qualidade de vida ("muito melhor" ou "um pouco melhor") para os três grupos, sem diferença estatística entre eles. O único efeito colateral observado foi boca seca, presente em 63.0% da amostra.

Conclusão: Pacientes com sobrepeso e obesidade portadores de hiperidrose palmar ou axilar apresentaram melhora significativa na qualidade de vida após o tratamento com oxibutinina, sendo os resultados comparáveis aos de indivíduos com peso normal.

Introduction

Hyperhidrosis is the production of excessive sweat beyond what is required for the body's thermoregulatory needs.[1] Palmar (PH), plantar (PlH), and axillary hyperhidrosis (AH) are the most frequent presentations in both genders and across all age groups. Hyperhidrosis affects approximately 3% of the general population, and actively interferes with patients' quality of life (QOL), causing issues in social, professional, and emotional spheres.[2] The psychological stress caused by excessive sweating is the main drive for patients to seek medical assistance, who are usually willing to undergo any possible treatment option that will improve their QOL. Until the present moment, the lack of efficient therapeutic options available for hyperhidrosis treatment in obese patients has left this population without prospect of improvements in QOL.

Overweight and obesity, defined as body mass index (BMI) greater than 25 kg/m^2 and 30 kg/m^2, respectively, are the main conditions associated with more severe sweating, possibly as a result of reduced heat loss due to thicker layers of fat in subcutaneous tissues. These patients have greater difficulty in maintaining normal body temperature levels, and therefore produce excessive perspiration as a compensatory mechanism.[3]

Video-assisted thoracic sympathectomy (VATS) is currently considered the optimal technique for treatment of primary hyperhidrosis. It is a safe, effective, and minimally invasive method;[4–7] however, it presents limited applicability in obese patients. Increased surgical risk, technical limitations, and more severe levels of compensatory hyperhidrosis explain why surgical indications are greatly restricted in these individuals.[8]

Oxybutynin is an anticholinergic medication widely used in urology for treatment of bladder urge incontinence. Sweat glands are stimulated by acetylcholine; thus, the anticholinergic effect of oxybutynin is responsible for its effectiveness against excessive sweating.[9] It is a safe medication, with few absolute contraindications; the most important is closed-angle glaucoma. Potential side effects include dry mouth, constipation, headache, nausea, and urinary retention. Few drug interactions have been reported, and when present, they involve concomitant use of cytochrome P450 metabolism-dependent medications.[10,11]

Recent studies have disclosed good results with the use of oxybutynin for the treatment of hyperhidrosis.[12–15] Nonetheless, a specific analysis of the effectiveness of this medication in obese patients had not been conducted. This study aimed to analyze QOL after treatment with oxybutynin in obese patients with PH and AH, and to compare the results with those of normal weight individuals.

Methods

This was a retrospective study, based on medical chart review of 559 patients treated with oxybutynin from January 2007 to December 2011. The study was approved by the ethics committee of the institution.

The patients involved were divided into three groups according to their BMI. The first group was composed of 411 (73.5%) normal weight patients (BMI < 25 kg/m^2), the second consisted of 121 (21.6%) overweight patients (25< BMI < 30 kg/m^2), and the third, of 27 (4.9%) obese individuals (BMI < 30 kg/m^2).

Age, gender distribution, and location of hyperhidrosis according to BMI are shown in Table 1. The lowest average age was observed in the normal weight group. PH and female gender were predominant in all weight categories.

The same medical treatment protocol was applied to all patients. During the first week, 2.5 mg of oxybutynin were administered once a day in the evening. From the eighth to the 42nd day, the patients received 2.5 mg of the medication twice a day; from the 43rd day to the end of the 12th week, 5 mg were administered twice a day. Experience has shown that a staged administration reduces the impact of anticholinergic side effects.

Patients were analyzed in three different moments during the study. The first evaluation was performed before the start of medication; the second, after six weeks of treatment;