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Professional paper

SLEEP-DISRUPTING PRURITUS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS: A CASE REPORT

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Abstract

The most superficial parts of the skin are the places where the sensation of itching is created and registered through free nerve endings. The sensation of itching is transmitted through myelinated A and unmyelinated C nerve fibers from the skin, through the dorsal roots and dorsal horns of the spinal cord to the thalamus and from there to the cerebral cortex. It is assumed that numerous mediators are involved in its realization, but histamine is considered the leading trigger with a proven effect on itch receptors. Pruritus is an accompanying symptom in many dermatological diseases but also in certain diseases of the internal organs. Clinically, we distinguish two forms of itching: pruritus cum material and pruritus sine material. A 68-year-old female patient, a pensioner, previously worked as a textile worker and was constantly standing for almost 32 years. On examination, she presented due to varicose veins in the lower extremities with a special emphasis on intense itching in the lower legs that persists for a long period of time. She did not use any therapy. On examination, in addition to reticular veins and varicose veins, there is also extremely dry skin on the body, especially on the lower legs, with light desquamation, and in places, there are visible abrasions caused by itching. The patient reports that sometimes the itching disturbs her sleep.

Keywords: diabetes mellitus, blood vessels, ulcus crurum, peripheral artery disease

Introduction

Pruritus is a common symptom in humans, which can sometimes disrupt sleep and even daily activities. Pruritus is an unpleasant sensation that occurs on the skin and some mucous membranes and as a reaction causes the need to itch, scratch or rub. The most superficial parts of the skin are places where the sensation of itching is created and registered through free nerve endings. The sensation of itching is transmitted through myelinated A and unmyelinated C nerve fibers from the skin, through the dorsal roots and dorsal horns of the spinal cord to the thalamus and from there to the cerebral cortex. Itching can be caused by exogenous physical, thermal or chemical stimuli or by endogenous causes. It is assumed that numerous mediators are involved in its realization, but histamine is considered the leading trigger with a proven effect on itch receptors. Other substances that cause itching directly or indirectly are serotonin, trypsin, kallikrein, bradykinin, prostaglandins, etc. Itching can be generalized or localized to certain parts only, occasional or continuous, and according to intensity weak, moderate and strong. Pruritus is an accompanying symptom in many dermatological diseases but also in certain diseases of the internal organs. Clinically, we distinguish two forms of itching: pruritus cum material and pruritus sine material. We speak of pruritus cum materia when itching is a symptom or result of some skin manifestation or disease, while we speak of pruritus sine material when there is itching but no visible skin changes. This form occurs as an accompanying symptom of numerous diseases of the internal organs.

Case report

A 68-year-old female patient, a pensioner, previously worked as a textile worker and was constantly standing for almost 32 years. On examination, she presents due to varicose veins in the lower extremities with a special emphasis on intense itching on the lower legs that persists for a long period of time. She did not use any therapy. On examination, in addition to the reticular veins, varicose veins, extremely dry skin is also visible on the body, especially on the lower legs with light desquamation and in places, visible excoriations caused by itching. The patient reports that sometimes the itching disrupts her sleep. The patient underwent a color Doppler to determine the degree of venous insufficiency with the following finding - Arterial flow registered an orderly three-phase Doppler signal at all levels of AF, AP, AT and ADP. The deep veins are flowing and without signs of DVT. The superficial venous system - SFJ with moderate reflux bilaterally. The right leg has a dilated VSM, in the area of the upper leg it has a diameter of 0.75x0.75, while in the rural part it has a diameter of 0.9x0.9 with numerous varicose branches along the entire length, VSP minimally dilated and with a normal flow into the VP. The left leg has a less dilated VSM in the area of the upper leg it has a diameter of 0.6x0.65, while in the rural region 0.85x0.8, numerous varices are also visible, VSP is of a regular diameter and with a normal flow into the VP. Perforator veins are noted in the lower middle coquette on both sides. The laboratory analyses performed were within the limits of reference values. The patient has DM on tablet therapy for the last 10 years with properly regulated glycaemia (Tbl Metformin 1000 mg 2x1). The patient was given antihistamine therapy according to a specific scheme, corticosteroid therapy with a minimum initial dose, emollient cream to be applied to the entire body several times during the day, showering exclusively with an oil bath, venotonics and a recommendation for compression therapy for the lower extremities. After two weeks of therapy, the patient reported that she felt much better and that the itching was relatively reduced, the desquamation was in the reduction phase, the same therapy continued for the next few months, with each subsequent check-up the patient was getting better and eventually no longer having any problems, but the therapy was continued to prevent a possible regression of the symptoms.

Discussion

Itching can sometimes be a big problem for patients, from a therapeutic point of view there is no universal remedy that would reliably stop this unpleasant symptom. Causal therapy involves discovering and eliminating the cause that led to the condition itself. Systemic symptomatic therapy is applied to intense itching, a satisfactory effect is achieved with antihistamines and sedatives, if necessary, corticosteroids or phototherapy can also be included. Only a small number of studies have investigated pruritus in the elderly. They are characterized by selection bias and differing endpoints (pruritic skin disease or itch). An American study of cutaneous complaints in the elderly identified pruritus as the most frequent, accounting for 29% of all complaints (106). A Turkish study in 4,099 elderly patients found that pruritus was the most common skin symptom, affecting 11.5% of patients. Women were more frequently affected (12.0%) than men (11.2%). Patients older than 85 years showed the highest prevalence (19.5%) and pruritus was present more frequently in winter months (12.8%) (107). Pathophysiological changes of the aged skin, decreased function of the stratum corneum, xerosis cutis, co-morbidities and polypharmacy may all contribute to its etiology (109).

Conclusion

Timely treatment of pruritus significantly improves the daily life of patients in performing their functions because otherwise it leads to greater stress. Pruritus is a frequent symptom in medicine. Population-based studies show that every 5th person in the general population has suffered from chronic pruritus at least once in the lifetime with a 12-month incidence of 7%. Pruritus may be the result of a dermatological or non-dermatological disease. Especially in non-diseased skin it may be caused by systemic, neurological or psychiatric diseases, as well as being a side effect of medications. In a number of cases chronic pruritus may be of multifactorial origin. Pruritus needs a precise diagnostic work-up. Management of chronic pruritus comprises treatment of the underlying disease and topical treatment modalities, including symptomatic antipruritic treatment, ultraviolet phototherapy and systemic treatment. Treating chronic pruritus needs to be targeted, multimodal and performed in a step-wise procedure requiring an interdisciplinary approach.

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