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Erythromelalgia – the role of hypnotherapy

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Summary: Erythromelalgia is an unusual condition characterized by attacks of burning pain in the hands and feet with local congestion and increased skin temperature. We report a case of erythromelalgia, with transient hypertension and elevated urinary catecholamines successfully treated by hypnotherapy. Such an association has not to our knowledge been previously reported in English language publications.

Introduction

The term erythromelalgia was first used by Mitchell in 1878 to describe a syndrome of red congestion and burning pain in the hands and feet. The burning distress in the extremities with local symptoms of redness, warmth and swelling is characteristic of this condition. It has been described in association with myeloproliferative disorders such as essential thrombocythaemia. The clinical features are believed to be secondary to a platelet mediated arteriolar inflammation and thrombosis.

Although various types of erythromelalgia have been described, its association with transient hypertension and raised urinary catecholamine is decidedly rare and has not been previously reported in the English literature. We describe a patient with erythromelalgia associated with transient hypertension and raised urinary catecholamines who failed to respond to conventional treatment. Hypnosis however induced a complete remission of her symptoms without any recurrence.

Case report

A previously fit 18 year old woman was admitted with a 4 week history of constant, severe, burning pain in her hands and feet. The pain did not respond to simple analgesics and relief was only obtained by immersion in ice-cold water.

Physical examination was unremarkable apart from a persistently elevated blood pressure of 165–185/110–125 mmHg. Initially her hands and feet appeared normal with palpable peripheral pulses and there was no neurological abnormality.

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After 2–3 days her hands and feet developed the classical appearance of erythromelalgia and became hot, red and swollen. There was no evidence of any collagen connective tissue disease and there was no skin rash. Her systemic examinations were otherwise normal.

The results of the following laboratory investigations were normal or negative on several occasions: full blood count and differential, erythrocyte sedimentation rate, C-reactive protein, urea and electrolytes, bone and liver biochemistry, plasma glucose, anti-nuclear factor, immunoglobulins, cryoglobulins and immune complexes. Twenty-four hour urinary hydroxymethyl mandelic acid was elevated on 3 separate occasions at 57, 48 and 46 mmol/24 h (normal range = 10–35 mmol/24 h). Electrocardiogram, chest X-ray and abdominal ultrasound were normal.

Pharmacological therapies attempted to control the somatic pain included aspirin, paracetamol, various non-steroidal anti-inflammatories, vasodilators, beta-blockers, pethidine, carbamazine, amitriptyline and chemical sympathectomy. None of these proved effective. Finally, a psychological approach to pain control was attempted. Her blood pressure, however, was controlled with the angiotensin converting enzyme inhibitor, captopril.

She was then seen and assessed by the psychiatrist. A full history and examination took place, which revealed a woman of normal premorbid function, from a stable background. No abnormality was detected in the mental state examination. There was no evidence to suggest that this was an hysterical conversion syndrome.

Hypnotherapy was chosen on account of her psychological stability and because the pain was believed to be acute and organically based. A

standard induction technique was used which allowed the achievement of the hypnotic state.[1] Whilst in the hypnotic state the patient was encouraged to 'allow' the pain to flow out of the affected extremities, leaving a 'normal' sensation behind. The patient was also, whilst in the hypnotic state, taught to induce the state of self-hypnosis and hence self-control over the painful symptoms.

The initial effects were satisfactory, and the techniques and instructions were repeated on a further 3 occasions.

The patient was seen 2 weeks later and was pain free. At the time of discharge she was totally asymptomatic although anti-hypertensive therapy was continued. Two weeks after her discharge from hospital she was found to be hypotensive by her general practitioner and the anti-hypertensive therapy was discontinued. She has since remained normotensive and her 24 h urinary excretion of catecholamines were within the normal range.

She was reviewed at 6 months when she was noted to be asymptomatic and exhibited no psychological abnormality. The family interview this time confirmed the impression of a perfectly normal woman who has had the misfortune to develop a painful physical condition.

Discussion

Primary erythromelalgia is a rare condition of unknown aetiology, characterized by burning pain in the hands and feet.[2] Secondary erythromelalgia may, however, be associated with systemic diseases such as myeloproliferative disorders and connective tissue diseases.[3]

In the primary condition, a local disturbance in vasomotor regulation has been postulated as a pathogenic factor, but treatments aimed at altering vascular tone are not consistently effective. More recently it has been suggested that the condition might be explained by a local reduction in the number of autonomic nerve terminals in the affected area.[4,5] A French report describes one case[4] of erythromelalgia associated with hypertension and elevated urinary catecholamines. Although the exact mechanism of sensory–autonomic interaction involving the production of pain is not known, Blanchard *et al.*[4] postulated that both the pain and the hypertension may be the result of a local reduction in autonomic nerve terminals with subsequent denervation hypersensitivity to circulating catecholamines. This hypothesis does not explain the transient nature of the hypertension or the cause of the raised urinary catecholamine excretion.

The role of hypnosis in the relief of pain due to cancer, obstetric and surgical operation and dentistry has been well documented. It is considered to be one of the best forms of psychological treatments for pain. Hypnosis should be considered for acute organically based pain in psychologically stable patients. There are, however, various ingenious methods for suggesting the reduction of pain and the 3 classes of procedures are: the direct suggestion of pain reduction; altering the experience of pain, even though the pain may persist; and directing attention away from the pain and its source. None of these procedures is, however, mutally exclusive. Our patient was treated by direct suggestion. Hypnosis is quick, efficacious and free from side effects, if carried out under appropriate indication. It has a specific effect which is thought to derive from the hypnotisability of the patient and both sensory and reactive components of the pains are affected.

The underlying mechanisms are not understood, but would appear to act at a primary central level. It is possible for something to occur at an intellectual level but not be available to the consciousness of the hypnotized person, as highlighted in the 'hidden observer' theory.[6] The 'hidden observer' is a convenient label for the information source tapped through experiments with automatic writing or automatic talking. It is possible that it brings about a split in the consciousness by means of a central stimulation which modifies the spinal responses due to pain.

Our case highlights the rarity of the syndrome of erythromelalgia and episodic hypertension and the refractory nature of its response to treatment with conventional analgesic. Perhaps a greater awareness is necessary amongst clinicians so that diagnosis can be attained early and hypnotherapy tried as a first line of treatment. Fortunately, with a revival of interest in hypnosis in the nineteenth century, active antagonism to hypnosis is no longer prevalent and its use in pain relief, while not widespread, is increasing.

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