

MIND-BODY INTEGRATIVE TREATMENT OF PSYCHODERMATOSES

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ABSTRACT

The mind-skin interaction has been progressively clarified by recent research that has focussed on psychoneuroimmunology. This article focusses on brain-cell communication by means of chemical messengers and the changes in the skin they provoke under stress, providing an origin to dermatoses linked to the mind, called psychodermatoses. The author refers to three types of psychodermatoses: those caused by prior psychiatric disturbances, those that cause psychological disturbances by their aspect, and those that are influenced by emotional states. This article highlights the four simple and natural mind-body anti-stress techniques of posture, diaphragmatic breathing, muscle relaxation, and meditation that every doctor can teach to patients, which will enable them to face stressful situations and therefore protect themselves against the negative psychological effects of stress. Several therapeutic behaviours in the doctor-patient relationship are recommended to build a patient's trust in their doctor and to encourage the patient to play an important part in their treatment process. It is emphasised that the treatment of psychodermatoses needs to be co-operative, integrating specialists in dermatology, psychiatry, and psychology. Dermatologists take care of the skin alterations, while psychiatrists are involved with the associated mental disturbances and are able to prescribe a large range of psychopharmaceuticals to treat anxiety, depression, post-traumatic stress disorder, and compulsive states. Psychotherapists try to correct erroneous behaviours and false feelings, employing cognitive-behavioural therapy, analytic and reprogramming techniques, and also hypnosis, in order to rid patients of psycho-emotional perturbations and facilitate successful outcomes in the skin.

Keywords: Psychodermatology, psychoneuroimmunology (PNI), stress, mind-body, doctor-patient relationship, biopsychosocial.

INTRODUCTION

The mind-body interaction has always been evident. Some normal physiological events demonstrate how thoughts have physical consequences in the body, for example:

- Flushing of the cheeks in embarrassing situations, whether the problem be real or imaginary. Simply thinking of the situation is enough to unintentionally provoke rubefaction.
- Paleness of the skin and muscle contraction when thinking of a serious threat.
- Having hair on the body stand on end, or a 'skin crawling' sensation, when in the presence of something an individual perceives as a phobia, for example, a snake.

- Tachycardia and tachypnoea under stress.
- Vasodilation when one feels an overwhelming rage, with the skin turning red.
- Activation of the salivary glands upon imagination of a palatable food source, for example if one imagines fresh lemon juice on the tongue. The lemon is only an idea, but the salivation that occurs is perceptible.

All individuals are aware of these effects through their own observations and experiences: scientific proof is not required of them to assure the public that these phenomena are real. These processes take place in the mind but alter the body's physiology. It is an evidence-based fact that the mind acts over the body and has the power to cause perceptible changes within it. Meanwhile,

these clear phenomena have so far been ignored by dualistic medicine, which stated that the mind and body were two separated entities and wholly independent from one another (Cartesian paradigm). It was only in 1991 that the medical pluralism was recognised, when the National Institutes of Health (NIH) established the Office of Alternative Medicine, which was intended to explore the scientific basis for the effectivity of other types of medicines from outside of the biomedical model.^{1,2}

Research carried out by psychologist Dr Robert Ader and pathologist Dr Nicholas Cohen in 1970 discovered the ways in which mental events influenced the physical alterations of the body, particularly the immunologic and endocrine functions, in the form of pavlovian conditioning. In 1975, they published an article on their findings and started a new field of science, called psychoneuroimmunology (PNI).³ Their work promoted the transformation of the materialistic, mechanistic, and reductionist biomedical concepts, and brought to light the biopsychosocial or integrative concept in which health and disease are viewed as a continuum and the dynamic result of mind, emotions, culture, heredity, and environmental interaction. This integrative model encompassed several medical specialties, such as endocrinology, gastroenterology, cardiology, and dermatology. With reference to the skin, it resulted in a broadened knowledge of how the skin functions in combination with emotional states and psychological activity. A new understanding was conceived, called 'psychodermatology', the principles of which are a) the mental and emotional mechanisms involved in the genesis, maintenance, and worsening of dermatoses; and b) the mental, emotional, and social consequences of skin diseases.

Starting with PNI, the concept evolved so that the mind and body constituted a functional unit with bidirectional communication, where nothing happens in one without impacting on the other.⁴ Likewise, the mind and skin are constantly communicating so that cutaneous physiology is influenced by thoughts, and cutaneous sensations are delivered to the brain, interpreted, and recognised by the mind. The brain is the command centre where the transductions of subtle energy in chemical messengers takes place.⁵

MIND-SKIN CONNECTION

The mind-skin relationship uses the same pathways as all tissues and organs. Thoughts of stress are

transduced from vibrational signs in chemical substances and activate the paraventricular nucleus of the hypothalamus, and the closely related locus coeruleus nucleus in the brain stem. The hypothalamus secretes corticotropin-releasing hormone that reaches the pituitary gland where it stimulates adrenocorticotropin hormone liberation. This hormone acts as a messenger to the adrenal glands, which are induced to secrete cortisol and small amounts of adrenaline. The locus coeruleus has a neuronal connection with the paraventricular nucleus and activates the sympathetic nervous system to secrete noradrenaline, stimulating the production of adrenaline and noradrenaline by the adrenal glands. These catecholamines, as well as cortisol, target the skin cells directly, affecting their performance and the innate and adaptive immune systems present within the skin.⁶ Furthermore, via nerves and circulation, a large number of chemical messengers are sent from the brain as neurotransmitters, neurohormones, and neuropeptides, their compositions depending on the thoughts processed in the central nervous system. Thoughts may be unpleasant, like worries, or pleasant, such as the idea of achieving a goal. Unpleasant thoughts drive the anterior pituitary to create a state of alertness and tension, known as the 'fight-or-flight' reaction, while pleasant thoughts stimulate the posterior pituitary to secrete calm and satisfaction hormones, leading to a relaxation response.

Cutaneous cells express receptors for every chemical messenger sent from the brain and respond to all received stimuli, producing the same substances that come from the brain, such as adrenocorticotropin hormone, corticotropin-releasing hormone, serotonin, prolactin, and substance P.⁷⁻⁹ In a situation where the organism is exposed to stress, increased concentrations of chemical messengers flow to the skin, where they exert their action by changing the skin functions and provoking a number of disorders, examples of these include evident worsening of dermatoses, impairment of wound healing,^{10,11} activation of sebaceous and sweat glands, alteration of recovery of the stratum corneum barrier,¹² decrease in antigen presentation function of the Langerhans cells,^{13,14} neurogenic inflammation by substance P liberation in nerve endings, reduction of hair growth,¹⁵⁻¹⁷ and/or acceleration of cutaneous carcinogenesis induced by ultraviolet light.¹⁸

These facts indicate that the mind, nervous system, and skin constantly communicate by means of

chemical messengers and their receptors, named the psychosomatic network.¹⁹ These messengers are the chemical equivalents of thoughts and each thought generates a biochemical state in the body. This is not a fact that occurs by chance, or only under special conditions, but takes place as a physiological event all the time.

PSYCHODERMATOSES

Cutaneous events that involve the mind-skin interaction are called psychodermatoses and have been observed and reported since the era of Hippocrates.²⁰ What is new, however, is the light modern science is shedding on the link between emotional stresses, psychiatric disease, mediators, and functioning of skin cells, all of which are jointly involved in the pathogenesis of dermatoses. In a general sense, psychodermatoses are classified into three groups: Group 1: dermatoses originating from a primary psychiatric disturbance; Group 2: psychiatric disturbances caused by disfiguring dermatoses; and Group 3: dermatoses that are triggered, exacerbated, or maintained by psychological states.²¹⁻²³

In Group 1, the primary alteration exists in the mind or in the central nervous system function, and skin alterations come thereafter. The most commonly observed dermatoses in this group are delusions of parasitoses, dermatitis artefacta, psychogenic excoriations, trichotillomania, bromhidrosis, malingering, body dysmorphic disorders, somatoform disorders, psychogenic pruritus, lichen simplex chronicus, and acne excoriée. A variety of psychological processes form the basis of these dermatoses, with the most frequently observed being depressive, obsessive-compulsive, post-traumatic, delusional, and body dysmorphic disorders, as well as personality disorders and social phobia.²⁴

Group 2 includes dermatoses that give rise to mental and emotional instability. In these cases, the presence of the skin condition causes anxiety, depression, suicidal thoughts,²⁵ and feelings of fear, worry, embarrassment, impatience, anger, sadness, frustration, and/or distress. Sometimes patients isolate themselves from social contact and change the clothes they wear in order to hide the skin defect. Any sort of dermatosis can elicit these effects, but it is mainly seen in cases of psoriasis, vitiligo, acne, alopecia areata, rosacea, seborrhoeic dermatitis, hyperhidrosis, melasma, hypertrichosis, ichthyosis, and hidradenitis suppurativa.²⁶⁻²⁹

Group 3 is composed of dermatoses that are influenced by worries, post-traumatic stress, fear, negative thoughts, sadness, anxiety, and/or discouragement. Depending on the patient's psychological constitution, these and other emotional variances can start, maintain, or worsen dermatoses through changes in immunomediators. The conditions that are most likely to receive these influences are psoriasis, atopic dermatitis, seborrhoeic eczema, prurigo nodularis, lichen planus, chronic urticaria, alopecia areata, pruritus,^{29,30} and herpes simplex infections.³¹

INTEGRATIVE CARE

Due to the interaction of psychoemotional factors and the skin, it is mandatory that healthcare professionals care for both areas, pursuing an integrative, mind-body treatment. The dermatologist's role is to have knowledge of the pathogenetic mechanism of these dermatoses to allow the ability for them to manage the conditions, focussing on the cutaneous lesions. Depending on the nature and severity of the psychological or psychiatric impairment, the dermatologist should suggest that the patient has a consultation with a psychologist, psychiatrist, or both. No specialist has the skill to master dermatologic, psychotherapeutic, and psychiatric expertise combined, along with the techniques to apply these specialisms to each particular clinical case. Even if the dermatologist does have these abilities, they would not have enough time to give sufficient attention to each individual patient. Therefore, the collaboration among dermatologists, psychiatrists, and psychologists, is necessary for the effective treatment of psychodermatoses cases.

THE DOCTOR-PATIENT RELATIONSHIP

The most valuable help that the dermatologist can provide to their patients is the way they relate to their experiences. A healthy doctor-patient relationship is the simplest resource that can help the patient to gain a sense of satisfaction and happiness, for their own benefit.^{32,33} Some aspects of this relationship that should be followed by the doctor are:

- Welcome: How the doctor receives the patient, preferably with a friendly posture and a smiling face.
- Listen: The doctor should listen to what the patient has to say about the reason for their visit and pay strict attention to the significance

of their words, speculating what may be behind them.

- Qualify the complaints: The doctor must make it clear that they value the importance of the patient's complaints in relation to their everyday lives.
- Empower the patient: The doctor should indicate what the patient can do to help themselves without help from the doctor.
- Avoid iatrogenic words: The doctor should never say "that condition has no cure" or other words that can give the patient negative feelings and expectations; remember that the patient's body reacts to their beliefs and to the doctor's convictions.³⁴
- Lead the patient to perceive things that are beyond the available evidence.
- Warn about the effects of the imagination: Mental images may have the potential to become reality, so it is always better to have positive mental thoughts.
- Encourage the patient to have faith in themselves to change their condition.
- Make a diagnosis, but do not make a prognosis; often the doctor's predictions will not be fulfilled and this can cause stress in the patient if the alternative consequence is disastrous.
- Touch: Ensure the patient knows they can rely on the doctor for help through verbal support. Provide physical support where appropriate; however, never invade the patient's space if there is no permission to get closer. The patients who have received a supportive embrace from their doctor have had the sensation that the visit lasted double that of the time it actually did.³⁵

MIND-BODY ANTI-STRESS RESOURCES

Stress, perceived as the set of abnormal reactions that an organism is forced to accomplish in order to adapt to a threatening situation, is the origin of many illnesses; the number of cases of stress-related illnesses is increasing since research provides greater knowledge of the mind-body communication pathways. This allows patients a greater understanding of the stress mechanisms and enhances their ability to efficiently deal with it. Stress influences the brain, glands, hormones, immune system, heart, and lungs to provide energy, oxygen, muscle strength, fuel, resistance to pain, mental acuity, and temporary defence against infections. Meanwhile, when chronically

activated, it leads to damage in the organism and exacerbates disease.^{36,37}

Nobody is free from stress; however, it is possible to adopt methods of adapting to stress to protect oneself from its consequences. This can be achieved by adopting natural attitudes that allow relaxation of the muscles and maintenance of slow and calm breathing to keep the brain alert. These attitudes can be taught to the patient by every doctor during a consultation and they will make a significant difference to their lives if incorporated into their daily routine. There are four procedures that patients can adopt to reduce their stress levels:

- Erect posture, including a straight spinal column, shoulders slightly backwards, chin up, face directly forward, and arms hanging down. This position favours movement of the chest to ensure proper breathing and psychologically it makes the person feel confident and self-aware.
- Diaphragmatic breathing involving calming inhalations that are deep and slow, dilating the abdominal wall so that the diaphragm is forced down and the inhaled air reaches the lower part of the lungs.
- Muscle relaxation to consciously and progressively relieve muscle tension from the feet to the eyelids and then staying in this physical state for a number of minutes.
- Meditation is a well-studied technique that has proven, positive results on the brain physiology and functioning. There are numerous forms of meditation; the most commonly used forms in medicine are transcendental meditation and mindfulness meditation. Regular meditation practice maintains the person in a relaxed state of alert.

These four attitudes lower stress and reduce the burden on the immune, endocrine, cardiovascular, and nervous systems, consequently favouring overall health.³⁸

SPECIALIST CO-OPERATION

Psychological and emotional states in relation to dermatoses are increasingly being demonstrated. They are not accidental and are in fact part of the patient's clinical picture. Therefore, all disease aspects should be treated together, since each one influences the others. The skin alterations that appear as eczema, excoriations, tears, cuts, bites, burns, wounds, scars, and alopecic areas are

the dermatologist's field of action. In cases of dermatoses secondary to psychiatric problems, improvement of the condition depends on the control of the mental state. When the dermatosis itself gives rise to secondary emotional perturbations, the patient will only regain tranquillity as the skin recovers to its normal appearance. In cases of dermatoses aggravated by stress, there is a mutual influence between the improvement of one factor and the subsequent improvement of the other.

The psychiatrist, after performing the psychodiagnosis,³⁹ has access to a range of psychopharmaceuticals, used to control psychoses and emotional and psychological disturbances that lead to cutaneous problems, such as neuroleptics, antidepressants (tricyclic and selective serotonin reuptake inhibitors, noradrenaline-serotonin reuptake inhibitors, noradrenaline-dopamine reuptake inhibitors, and presynaptic antagonists), anxiolytics (benzodiazepines and nonbenzodiazepines), antihistamines with central effect, and hypnotics.³⁹ All of these medications cause a variety of side effects and have specific characteristics. Their correct use needs to be performed by a dermatologist who is experienced in the management of these substances, or by a psychiatrist, the healthcare professional best qualified to prescribe these medications to help relieve patient symptoms.

Emotional disturbances associated with psychodermatoses demand psychotherapies. In order to treat these conditions successfully, the psychotherapist should have an interest in dermatology, in the role skin diseases exert on the patients' psyche, and in the power psychoemotional problems possess in initiating cutaneous reactions. Post-traumatic stress, mood disturbances, negativity (preference for bad results), conflicts, difficulties in decision-making, worries, sadness, losses, discourage, frustrations, mourning, anger, and other unpleasant emotions powerfully influence the skin, as well as originating from skin conditions. In these situations, psychotherapy is essential

and patients using psychiatric medication have a more favourable prognosis when also attending psychotherapy sessions.⁴⁰⁻⁴³ There is a diverse range of psychotherapies that can be useful for patients. The most commonly practised are analytic therapies, like psychoanalysis, cognitive-behavioural therapy, transactional analysis, Gestalt-therapy, bioenergetics analysis, and many more. Clinicians can also rely on the so-called 'mind reprogramming' therapies, examples of which are eye movement desensitisation and reprogramming, neuro-linguistic programming, thought field therapy, and emotional freedom techniques, all of which give fast results. It is important to acknowledge that no single type of psychotherapy is applicable to all patients or will give the same outcome in every case. Whether the results will be positive is very much based on the individual. Another method of treatment is hypnosis, which can be used in a large number of dermatologic issues, potentially providing impressive improvements and even cure.⁴⁴⁻⁴⁷

Ideally, the three specialists discussed in this review should attend joint consultations in a liaison clinic in order to merge their biomedical and biopsychosocial views. The patient should not know who is a dermatologist, psychiatrist, or psychologist, therefore avoiding possible refusal of the patient to liaise with any specialist type.^{48,49} This is the most efficient way to deal with psychodermatoses, although it is rarely feasible in the majority of hospitals.

CONCLUSION

As mentioned, PNI has continuously contributed to clarifying how mental processes influence the organism and how the mind is influenced by the body. In regard to the skin, we now understand the mechanisms by which many, if not all, dermatoses are linked to the mind. This understanding has led to the creation of the concept of psychodermatoses and the understanding that their treatment needs to be accomplished by integrating specialists in skin and psychology for consistent results; this would best be performed in liaison consultations.

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