

eISBN: 978-1-68108-301-8
ISBN: 978-1-68108-302-5

SKIN AND PSYCHE

The background of the cover features two hands reaching towards each other. The top hand is positioned higher and slightly to the left, while the bottom hand is lower and to the right. The background is a soft, bright gradient of light green and yellow, suggesting a sunlit or outdoor setting. The overall mood is one of connection and care.

Editors:
Klas Nordlind
Anna Zalewska-Janowska

Bentham  Books

Skin and Psyche

Edited By

Klas Nordlind

*Department of Dermatology
Karolinska University Hospital
Solna, Stockholm
Sweden*

&

Anna Zalewska-Janowska

*Psychodermatology Department
Medical University of Lodz
Poland*

Skin and Psyche

Editors: Klas Nordlind & Anna Zalewska-Janowska

(ISBN) eBook : 978-1-68108-301-8

(ISBN) Print: 978-1-68108-302-5

© 2016, Bentham eBooks imprint.

Published by Bentham Science Publishers – Sharjah, UAE. All Rights Reserved.

First published in 2016.

Acknowledgement:

Declared none.

BENTHAM SCIENCE PUBLISHERS LTD.

End User License Agreement (for non-institutional, personal use)

This is an agreement between you and Bentham Science Publishers Ltd. Please read this License Agreement carefully before using the ebook/echapter/ejournal (“**Work**”). Your use of the Work constitutes your agreement to the terms and conditions set forth in this License Agreement. If you do not agree to these terms and conditions then you should not use the Work.

Bentham Science Publishers agrees to grant you a non-exclusive, non-transferable limited license to use the Work subject to and in accordance with the following terms and conditions. This License Agreement is for non-library, personal use only. For a library / institutional / multi user license in respect of the Work, please contact: permission@benthamscience.org.

Usage Rules:

1. All rights reserved: The Work is the subject of copyright and Bentham Science Publishers either owns the Work (and the copyright in it) or is licensed to distribute the Work. You shall not copy, reproduce, modify, remove, delete, augment, add to, publish, transmit, sell, resell, create derivative works from, or in any way exploit the Work or make the Work available for others to do any of the same, in any form or by any means, in whole or in part, in each case without the prior written permission of Bentham Science Publishers, unless stated otherwise in this License Agreement.
2. You may download a copy of the Work on one occasion to one personal computer (including tablet, laptop, desktop, or other such devices). You may make one back-up copy of the Work to avoid losing it. The following DRM (Digital Rights Management) policy may also be applicable to the Work at Bentham Science Publishers’ election, acting in its sole discretion:
 - 25 ‘copy’ commands can be executed every 7 days in respect of the Work. The text selected for copying cannot extend to more than a single page. Each time a text ‘copy’ command is executed, irrespective of whether the text selection is made from within one page or from separate pages, it will be considered as a separate / individual ‘copy’ command.
 - 25 pages only from the Work can be printed every 7 days.
3. The unauthorised use or distribution of copyrighted or other proprietary content is illegal and could subject you to liability for substantial money damages. You will be liable for any damage resulting from your misuse of the Work or any violation of this License Agreement, including any infringement by you of copyrights or proprietary rights.

Disclaimer:

Bentham Science Publishers does not guarantee that the information in the Work is error-free, or warrant that it will meet your requirements or that access to the Work will be uninterrupted or error-free. The Work is provided "as is" without warranty of any kind, either express or implied or statutory, including, without limitation, implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the results and performance of the Work is assumed by you. No responsibility is assumed by Bentham Science Publishers, its staff, editors and/or authors for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products instruction,

advertisements or ideas contained in the Work.

Limitation of Liability:

In no event will Bentham Science Publishers, its staff, editors and/or authors, be liable for any damages, including, without limitation, special, incidental and/or consequential damages and/or damages for lost data and/or profits arising out of (whether directly or indirectly) the use or inability to use the Work. The entire liability of Bentham Science Publishers shall be limited to the amount actually paid by you for the Work.

General:

1. Any dispute or claim arising out of or in connection with this License Agreement or the Work (including non-contractual disputes or claims) will be governed by and construed in accordance with the laws of the U.A.E. as applied in the Emirate of Dubai. Each party agrees that the courts of the Emirate of Dubai shall have exclusive jurisdiction to settle any dispute or claim arising out of or in connection with this License Agreement or the Work (including non-contractual disputes or claims).
2. Your rights under this License Agreement will automatically terminate without notice and without the need for a court order if at any point you breach any terms of this License Agreement. In no event will any delay or failure by Bentham Science Publishers in enforcing your compliance with this License Agreement constitute a waiver of any of its rights.
3. You acknowledge that you have read this License Agreement, and agree to be bound by its terms and conditions. To the extent that any other terms and conditions presented on any website of Bentham Science Publishers conflict with, or are inconsistent with, the terms and conditions set out in this License Agreement, you acknowledge that the terms and conditions set out in this License Agreement shall prevail.

Bentham Science Publishers Ltd.

Executive Suite Y - 2
PO Box 7917, Saif Zone
Sharjah, U.A.E.
Email: subscriptions@benthamscience.org



CONTENTS

FOREWORD	i
PREFACE	ii
LIST OF CONTRIBUTORS	iii
CHAPTER 1 SKIN AND PSYCHE: BIOLOGICAL ASPECTS	3
<i>Nwnt gpv'O lugi {</i>	
INTRODUCTION	3
INNERVATION OF THE SKIN	3
Anatomical Connections	4
Neurotransmitters	5
Skin Cells Have Neuronal Capacities	6
FUNCTIONAL LINKS BETWEEN SKIN AND THE NERVOUS SYSTEM	7
The Neuro-immuno-cutaneous System	8
WHEN THERE IS A SKIN DISORDER...	9
SKIN AND STRESS	10
ITCH	11
CONCLUSION	13
CONFLICT OF INTEREST	13
ACKNOWLEDGEMENTS	14
REFERENCES	14
CHAPTER 2 PSORIASIS AND STRESS: A REVIEW	25
<i>Xgt c'Ngkdxk'k'cpf "Cxp'O gpvgt</i>	
INTRODUCTION	25
PATHOPHYSIOLOGY OF THE PSORIASIS- STRESS RELATIONSHIP	26
PERSONALITY TRAITS IN PSORIASIS	28
QUALITY OF LIFE IN PSORIASIS	29
PSORIASIS AND ANXIETY	32
PSORIASIS AND DEPRESSION	35
PSORIASIS AND SEXUAL DYSFUNCTION	37
PSORIASIS AND SMOKING	39
PSORIASIS AND ALCOHOL INTAKE	40
TREATMENT OF STRESS IN PSORIASIS	41
CONCLUSION	43
CONFLICT OF INTEREST	44
ACKNOWLEDGEMENTS	44
REFERENCES	44
CHAPTER 3 ACNE VULGARIS: PSYCHOLOGICAL STATE	60
<i>Nwek'Vqo cu/Ctci qpgu'cpf "Ugtxcpf q'G00 ctt qp</i>	
INTRODUCTION	61
Acne	61
Psychological Impact of Acne	62
The Biopsychosocial Model	63
Age of Onset	64
Appearance Concern	64
Sexual Health	65
Stress	65
Burden of Acne	66

Racial Differences	67
Coping with Acne	67
COMORBIDITIES	67
Emotional Distress	68
Anxiety Disorders	69
Social Anxiety Disorder (Social Phobia)	69
Obsessive-Compulsive Disorder	69
Body Dysmorphic Disorder	70
Excoriation (Skin-Picking) Disorder	71
Depressive Disorders	71
Body Image	72
Suicide Risk	72
Self-Esteem	73
Quality of Life (QoL)	73
SCREENING FOR PSYCHOLOGICAL COMORBIDITIES AND QUALITY OF LIFE	73
Quality of Life	74
<i>The Dermatology Life Quality Index (DLQI)</i>	74
<i>The Skindex-16</i>	75
<i>The Acne-specific quality-of-life questionnaire (Acne-QoL)</i>	75
<i>The Acne Disability Index (ADI)</i>	75
<i>The Cardiff Acne Disability Index (CADI)</i>	75
Psychological Testing	75
<i>Body Image</i>	75
<i>Depression and Anxiety</i>	76
<i>Self-Esteem</i>	77
<i>Others</i>	77
TREATMENT	77
Psychological Intervention	78
<i>Helping patients to Define their Problem</i>	78
<i>What coping strategies are being used?</i>	78
<i>Strategies for facilitating Change</i>	79
<i>Cognitive-Behavioural Therapy</i>	80
Other Interventions	81
<i>Psychoeducation</i>	81
<i>Relaxation Training</i>	81
<i>Biofeedback Therapy</i>	81
CONCLUSION	81
CONFLICT OF INTEREST	82
ACKNOWLEDGEMENTS	82
REFERENCES	82

CHAPTER 4 BODY DYSMORPHIC DISORDER – QUICK GUIDE TO DIAGNOSIS AND TREATMENT

.....	88
<i>Fkpc'TcfwFlwtlgtfv</i>	
CASE STUDY	89
BACKGROUND	90
SYMPTOMATOLOGY	92
AETIOLOGY AND PATHOGENESIS	92
DIAGNOSIS	94
Example of Screening Question	94
TREATMENT	95
CONFLICT OF INTEREST	96

ACKNOWLEDGEMENTS	96
REFERENCES	96
CHAPTER 5 SKIN PICKING DISORDERS AND DERMATITIS ARTEFACTA	100
<i>Cpvj qpf 'Dgy rgl 'c'pf 'Rcfo c 'Oqj cpf cu</i>	
SKIN PICKING DISORDER	101
Synonyms	101
Key Features	101
Introduction	101
Epidemiology	101
Clinical Features	102
Differential Diagnosis	103
Investigations	103
Management	104
1. <i>Communication</i>	104
2. <i>Treatment of Skin Picking Disorder</i>	105
3. <i>Psychological and Psychiatric Interventions</i>	106
ACNE EXCORIÉE	107
Synonyms	107
Key Features	107
Introduction	107
Epidemiology	107
Clinical Features	107
Management	108
1. <i>Treatment of Skin Disease</i>	108
2. <i>Psychological and Psychiatric Interventions</i>	109
<i>Prognosis</i>	109
DERMATITIS ARTEFACTA	110
Synonyms	110
Key Features	110
Introduction	110
Epidemiology	110
Clinical Features	111
Differential Diagnosis	113
Investigations	113
Management	113
Dermatological Therapy	114
Psychiatric/Psychosocial Interventions	115
Prognosis	115
CONCLUSION	115
CONFLICT OF INTEREST	116
ACKNOWLEDGEMENTS	116
REFERENCES	116
CHAPTER 6 UNDERSTANDING THE CHALLENGES IN MANAGEMENT OF DELUSIONAL INFESTATIONS	118
<i>Oqpc 'Ocrx nqwk'c'pf 'Lgppl 'Owt cug</i>	
INTRODUCTION	119
CLINICAL PRESENTATION	119
Specimen Sign	121
DIAGNOSTIC APPROACH	121
The Approach to Patients with Delusional Infestations	124
Establishing a Therapeutic Alliance	124

Approaching Pharmacologic Therapies For DI	125
PHARMACOLOGIC THERAPY FOR DI	126
CONCLUSION	130
CONFLICT OF INTEREST	130
ACKNOWLEDGEMENTS	130
REFERENCES	131

**CHAPTER 7 LIVING WITH PSORIASIS;
MANAGING THE LIFE IMPACT OF PSORIASIS – PRACTICAL TIPS TO USE IN
CONSULTATION** 135

<i>Ej t k n k p g ' D w p f { . ' C r g z c p f t e ' O k t c e ' b p f ' U e p f { ' T O O e D t k f g</i>	
CASE STUDY	136
INTRODUCTION	137
PSYCHOLOGICAL FACTORS IN PSORIASIS	137
Key Beliefs	137
Emotions	138
<i>Alexithymia and Internalisation of Emotion</i>	<i>138</i>
<i>Stigma and Shame</i>	<i>139</i>
<i>Anticipation of Failure and Harm</i>	<i>140</i>
Behavioural Responses	141
<i>Illness Coping Strategies</i>	<i>141</i>
<i>Life Impact of Psoriasis</i>	<i>142</i>
<i>Physical Impact of Psoriasis</i>	<i>142</i>
<i>Clothing</i>	<i>143</i>
<i>Relationships</i>	<i>144</i>
<i>Social</i>	<i>145</i>
<i>Employment and Financial Burden</i>	<i>145</i>
<i>Lifestyle Issues – Alcohol, Smoking and Obesity</i>	<i>146</i>
STRESS AND DISTRESS IN PSORIASIS	148
Stress and Psoriasis	148
Distress and Psoriasis	148
Does Treating Distress Improve Psoriasis?	149
Psychotropic Medications	150
Psychological Interventions	150
<i>Arousal Reduction</i>	<i>150</i>
<i>Hypnosis</i>	<i>151</i>
<i>Cognitive Behaviour Therapy</i>	<i>152</i>
Recognition of Distress by Clinicians	153
Approaching the Life Impact of Psoriasis in Clinic	153
Assessment of Quality of Life impact and Distress in Clinic	154
Addressing Distress	155
How to Identify Suicide Risk	156
Patient Centred Consultation	156
Setting goals	156
CONCLUSION	158
CONFLICT OF INTEREST	158
ACKNOWLEDGEMENTS	159
REFERENCES	159

CHAPTER 8 PSYCHOLOGICAL TREATMENTS FOR DERMATOLOGICAL CONDITIONS 167

<i>C p f t g e ' Y ' O O G x g t u ' U e u n k e ' U f l n g m q o / x c p ' M q w k i ' e p f ' U i n k e ' x c p ' D g w i g p</i>	
INTRODUCTION	168
PREVALENT PROBLEMS IN PATIENTS WITH DERMATOLOGICAL CONDITIONS	168
PSYCHOSOCIAL FACTORS IN DERMATOLOGICAL CONDITIONS	171

PSYCHOLOGICAL ASSESSMENT AND DIAGNOSTICS IN DERMATOLOGICAL CONDITIONS	173
PSYCHOLOGICAL TREATMENTS FOR PATIENTS WITH DERMATOLOGICAL CONDITIONS	174
Treatments of Skin-Related Psychosocial Problems	175
Treatments of Itch-Scratching Problems	177
Treatments of Psychiatric Problems in Dermatological Practice	178
CONCLUSION	179
CONFLICT OF INTEREST	180
ACKNOWLEDGEMENTS	180
REFERENCES	180
CHAPTER 9 PSYCHOANALYSIS IN PSYCHODERMATOLOGICAL DISEASES	186
<i>Lqti g'EOWipkn</i>	
INTRODUCTION	187
The Skin Patients In Session: Some Transference-Counter Transference Events	187
WHAT IS PSYCHOANALYSIS?	188
WHAT ABOUT PSYCHOANALYSIS AND DERMATOLOGY?	190
1. Theory	190
2. Referral	193
<i>Difficulties in the Referral to Psychotherapy Treatment</i>	194
3. Dimensions of Diagnosis	196
<i>Levels of Diagnosis</i>	197
4. Skin Symptoms and Pathologies	200
<i>a. Itching</i>	201
<i>b. Appendixes of the Skin</i>	201
<i>c. Self Inflected Lesions</i>	203
<i>d. Psoriasis</i>	204
<i>e. Vitiligo</i>	206
<i>f. Allergy</i>	207
5. Therapy	210
<i>a. Present Conflicts and Patient's Motivation</i>	211
<i>b. A Different Way of Psychoeducation</i>	214
<i>c. Emotional Expression</i>	214
<i>d. Objectives Specifically Designed for Skin Patients</i>	215
CONCLUSION	217
NOTES	218
CONFLICT OF INTEREST	218
ACKNOWLEDGEMENTS	218
REFERENCES	219
CHAPTER 10 BUILDING A PSYCHODERMATOLOGY CLINIC	223
<i>Cpqc \ crgy un/Lcpqy un. 'UqnDt kw'Nqppg/Tcj o. 'Ugpn'Htldgti 'c'pf 'Pqtf'rkpf 'Mrcu</i>	
BACKGROUND	224
The Need for a Psychodermatology Clinic	224
Psychodermatology Clinics	225
AIMS	226
Location of the Clinic	226
Staff	226
Instruments	227
Patient Security	227
Treatments	228
Research	228

Evaluation	229
CONFLICT OF INTEREST	229
ACKNOWLEDGEMENTS	229
REFERENCES	229
SUBJECT INDEX	231

FOREWORD

Psychodermatology is a critically important aspect of dermatological practice because psychological factors significantly affect a large proportion of our patients. It is an entire field, not just one disease, such as psoriasis. As such, there are different areas within psychodermatology. One important area is psychophysiological disorders, whereby emotional stress frequently precipitates or exacerbates real skin condition. This is most often observed in inflammatory conditions, such as psoriasis and eczema, but the influence of stress is also often reported in conditions without observable inflammation, such as vitiligo and alopecia areata. Another important area involves primary psychiatric disorder in which there are no real skin disorders; the lesions are all self-induced. This area includes delusion of parasitosis, neurotic excoriations, trichotillomania, and factitious dermatitis. The third important area is secondary psychiatric disorder where patient suffers from the negative consequence of disfigurement, such as depression, anxiety, and social phobia. Lastly, psychodermatology includes cutaneous sensory disorder where patient experiences distressing symptoms without visible primary skin lesions or diagnosable internal condition.

This book on psychodermatology covers different areas. Moreover, within these areas, there are highly relevant diagnoses such as, skin picking and body dysmorphic disorder, which are discussed in detail in separate chapters. I highly recommend any practitioners of dermatology to familiarize himself/herself with psychodermatology through this clinically useful book that is easily accessible. The material in this book will undoubtedly greatly enhance our care of these patients who are the most unfortunate and miserable sufferers of psychodermatological disorders.

John Koo
Argentina Leon
UCSF Department of Dermatology
San Francisco
California
USA

PREFACE

Psychodermatology is a part of general dermatology. As dermatologists, we will definitely meet patients with parasite delusions and, neurotic excoriation/artefacts, dysmorphophobia, or stress-worsened eczema.

This area meets several challenges, such as economy and difficulties to assess the outcomes for the patients. At the same time, the area of psychodermatology has a substantial developmental capacity. This goes for patient's clinical treatment as well as for more theoretical research.

Anna Zalewska-Janowska and I first met at an European Society of Dermatovenerology (EADV) conference in Gothenburg, and we decided to, together with experts in the respective fields, form this e-book in order to shed light on this important part of dermatology. Subsequently, we organized a few sessions on the Neurobiology of the Skin at European Society for Dermatological Research (ESDR) Congresses.

This e-book mainly aims at creating an interest for psychodermatology in dermatologists, both hospital based and colleagues working as private practitioners. Important issues dealing with chronic inflammatory diseases, facial dermatoses, artefacts, dysmorphophobia, parasite delusions, and therapeutic steps are dealt with.

Klas Nordlind

Department of Dermatology
Karolinska University Hospital, Solna
Stockholm
Sweden
&

Anna Zalewska-Janowska

Psychodermatology Department
Medical University of Lodz
Poland

List of Contributors

- A. Bewley** Departments of Dermatology, Whipps Cross University Hospital, and The Royal London Hospital, London, UK
- C. Bundy** The Dermatology Research Centre and Manchester Centre for Health Psychology, The University of Manchester, Manchester Academic Health Science Centre, Manchester, UK
- AWM Ewers** Medical and Neuropsychology Unit, Faculty of Social and Behavioral Science, Leiden University, Institute of Psychology, Health, Leiden, Department of Medical Psychology, Radboud University Medical Centre, Nijmegen, The Netherlands
- S. Friberg** Psykiatri Nordväst, Karolinska University Hospital, Solna, Sweden
- V. Leibovici** Department of Dermatology, Hadassah-Hebrew University Medical Center, Jerusalem, Israel
- S.B. Lonne-Rahm** Department of Dermatology, Mälarsjukhuset, Eskilstuna, and Dermatology and Venereology Unit, Department of Medicine, Solna, Karolinska Institutet, Stockholm, Sweden
- M. Malakouti** Palo Alto Foundation Medical Group, Department of Dermatology, Mountain View, CA, USA
- S.E. Marron** Alcañiz Hospital, University of Zaragoza, Aragon Health Sciences Institute (IACS), Zaragoza, Spain
- S.R. McBride** Department of Dermatology, Royal Free NHS Foundation Trust, London, UK
- A. Menter** Department of Dermatology, Baylor University Medical Center, Dallas, USA
- L. Misery** Department of Dermatology, University Hospital of Brest, France
- A. Mizara** Department of Dermatology, Royal Free NHS Foundation Trust, London, UK
- P. Mohandas** Departments of Dermatology, Whipps Cross University Hospital, UK
- K. Nordlind** Department of Dermatology, Karolinska University Hospital, Solna, Sweden
- D. Radu-Djurfeldt** Psykiatri Sydväst, M46, Karolinska University Hospital, Huddinge, Sweden
- Koullil S. Spillekom-van** Health, Medical and Neuropsychology Unit, Faculty of Social and Behavioral Science, Leiden University, Institute of Psychology, Leiden Department of Medical Psychology, Radboud University Medical Centre, Nijmegen, The Netherlands
- L. Tomas Aragoes** University of Zaragoza, Aragon Health Sciences Institute (IACS), Zaragoza, Spain

iv

- J.C. Ulnik** Pathophysiology and Psychosomatic diseases, Psychology School, Buenos Aires University, Buenos Aires, Argentina
Argentine Psychoanalytical Association / Mental Health Department, Medicine School, Buenos Aires University, Buenos Aires, Argentina
- S. Van Beugen** Institute of Psychology, Health, Medical and Neuropsychology Unit, Faculty of Social and Behavioral Science, Leiden University, Leiden, The Netherlands
Department of Medical Psychology, Radboud University Medical Centre, Nijmegen, The Netherlands
- A. Zalewska-Janowska** Medical University of Lodz, Psychodermatology Department, Poland

Skin and Psyche: Biological Aspects

Laurent Misery*

Department of Dermatology, University Hospital of Brest, 2 avenue Foch, 29200 Brest, France

Abstract: The skin has a dense innervation with synapses between nerve endings and many cells. These cells communicate *via* neurotransmitters and their receptors. Thus, the nervous system may influence different skin functions, including immunity. In skin diseases, the equilibrium of these neurotransmitters is disturbed. There are numerous disorders of this neuro-immuno-cutaneous system (NEICS). The present chapter aims at understanding the impact of psyche in inflammatory skin disorders.

Keywords: Itch, Nerve, Neurotransmitters, Pruritus, Psyche, Skin, Stress.

INTRODUCTION

Frequent interactions exist between the skin and the psyche. These interactions are understood through the organization of the neuro-immuno-cutaneous system (NEICS) [1, 2], and its interactions [3, 4].

INNERVATION OF THE SKIN

The skin is the organ of touch, this being necessary for human homeostasis. The absence of touch may be followed by death, such as reported in congenital pain insensitivity [5]. The skin is densely innervated, with nerve fibers up to its outermost layer [6]. This chapter aims to provide some data to illustrate that nerve endings are not only cellular endings in the skin in order to obtain information and transmit them to the central nervous system (CNS). But sensory and autonomic nerve endings are also involved in numerous interactions within the skin.

* **Corresponding author Laurent Misery:** Department of Dermatology, University Hospital of Brest, 2 avenue Foch, 29200 Brest, France; Tel: +3329822315; Fax: +33298223382; E-mail: laurent.misery@chu-best.fr.

Anatomical Connections

Skin neurons have contacts with cutaneous cell endings, which contain neuro-secretory vesicles. These contacts may be viewed upon as synapses since the intercellular distance is less than 300 nm and being highly functional [7].

These contacts may be spontaneously produced *in vitro* (Fig. 1).

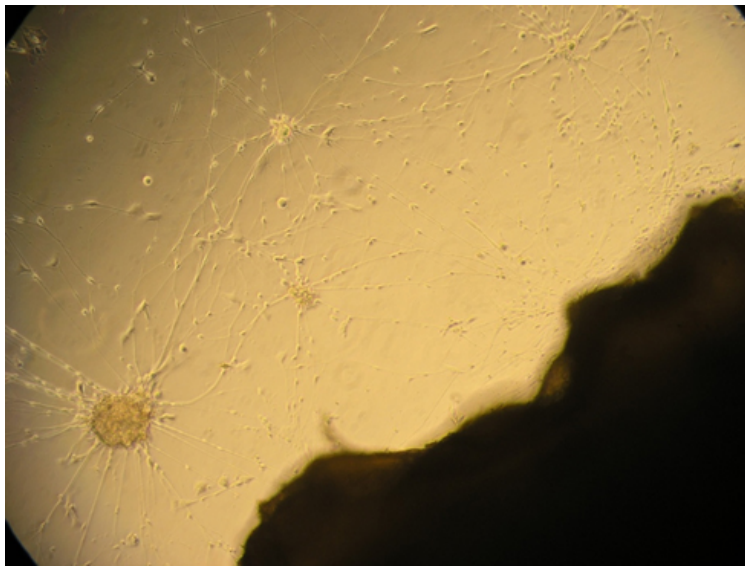


Fig. (1). *In vitro* co-culture of skin and neurons showing spontaneous growth of nerve endings from neurons (left) to the skin (right).

The first contacts between neurons and epidermal cells were described by Merkel [8], Merkel cells (or epidermal neuro-endocrine cells) being in contact with nerve endings [9]. Langerhans [10] also suspected the existence of such connections with Langerhans cells. These cells have then been shown to be in contact with axons *via* their cellular bodies [11, 12] and their dendrites [12]. In the epidermis, there are also contacts between nerve fibers and keratinocytes [13] and, more recently, connections with melanocytes have been reported [14].

In the dermis, there are contacts between nerve fibers and mast cells [15]. Recently dermal dendritic cells have been observed in contact with axons [16]. In contrast, perivascular nerves are found at the interface between the adventitia and

the smooth muscle of the middle tunica layer [17].

Neurotransmitters

Among the numerous neurotransmitters (or neuromediators), about thirty are described in human skin (Table 1) [18, 19]. Most are neuropeptides: bradykinin, calcitonin-gene related peptide (CGRP), gastrin-releasing peptide (GRP), neurokinins, neuropeptide Y (NPY), neurotensin, peptide histidine isoleucine (PHI), somatostatin (SOM), substance P, and vasoactive intestinal peptide (VIP). Others are neurohormones (adrenocorticotrophic hormone (ACTH), melanocyte-stimulating hormone (MSH), and prolactin), or catecholamines, endorphins, enkephalins, or acetylcholine (ACh). Nitric oxide (NO) is a more primitive, ancient skin neurotransmitter [20].

Table 1. Neurotransmitters in the skin.

Neuropeptides/neurohormones	Others
ACTH	ACh
CGRP	Angiotensin
CRH (corticotropin-releasing hormone)	DOPA
Endorphins	Dopamine
Enkephalins	Epinephrine
Galanin	Histamine
GRP	Norepinephrine
MSH	NO
Neurokinin A (NKA)	Serotonin
Neurokinin B (NKB)	
Neurotensin	
NPY	
PHI	
PHM (peptide histidine methionine)	
Prolactin	
PTH (parathyroid hormone)	
SOM	
Substance P	
VIP	

Psoriasis and Stress: A Review

Vera Leibovici^{1,*} and Alan Menter²

¹ *Department of Dermatology Hadassah-Hebrew University Medical Center, Jerusalem, Israel*

² *Department of Dermatology, Baylor University Medical Center Dallas, TX, USA*

Abstract: Psoriasis is a chronic immune-mediated genetic disease affecting approximately 120 million patients worldwide. Over 40 genes are associated with psoriasis. Common trigger factors include infections, trauma, medications and stress. There is substantial literature describing the link between psychosocial stress and the exacerbation of psoriasis.

We conducted a comprehensive review of the literature regarding pathophysiology, personality traits, quality of life, anxiety, depression, sexual dysfunction, alcohol, smoking and the treatment of psoriasis with respect to stress.

Our understanding of the brain-skin axis may help alleviate the suffering of our psoriatic patient population and shed light on the pathophysiology of psoriasis.

Keywords: Anxiety, Depression, Pathophysiology, Personality trait psoriasis, Quality of life, Sexual dysfunction, Stress, Substance abuse, Treatment.

INTRODUCTION

Psoriasis is a chronic immune-mediated genetic disease affecting approximately 120 million patients worldwide. Over 40 genes are associated with psoriasis with common trigger factors including infections, trauma, medications and stress.

Stress has been described, as being an important exacerbating factor not only in psoriasis, but in many other dermatological diseases, such as atopic dermatitis,

* **Corresponding author Vera Leibovici:** Department of Dermatology Hadassah-Hebrew University Medical Center, Jerusalem 91120, Israel; Tel: 972-2-6776368; Fax: 972-2-6244801; E-mail: vleibovici@hadassah.org.il.

acne vulgaris and chronic urticaria. Not all psoriatic patients believe that their disease is affected by stress: those who do are called "stress responders", as opposed to "non-stress responders" [1].

The literature depicts a range of 37%-78% of stress responders in psoriasis [2].

Living with psoriasis, a chronic, disfiguring disease, associated with social stigmata, poor self-esteem, anxiety and depression results in stress [3]. The stress in psoriasis can be generated by the disease itself or be caused by external psychosocial causes, such as bereavement, stress at work, family problems, financial matters, *etc.*

Kimball *et al.* [4] consider that the stress caused by living with psoriasis and psychosocial stress, that exacerbates psoriasis, is a bidirectional interaction that can even become a vicious cycle.

Psychosocial stress plays an important role in the exacerbation of psoriasis [5 - 8]. Gupta *et al.* [5] describe that the stress-responders have more severe psoriasis in the "emotionally charged" body areas, such as scalp, face, neck, forearms, hands and genital areas, while the total percentage of affected body surface does not vary. This is in line with the findings of Zachariae *et al.* [9], who also found that stress responders had more psoriatic lesions on the visible areas of the body rather than non-visible ones, while the total severity score (PASI) was not affected. However, Verhoeven *et al.* [10] endorsed a significant association between stress and severity of psoriasis. Fortune *et al.* [13] described that stress, apart from being a significant exacerbating factor for psoriasis can also affect the duration of treatment in psoriasis, (*e.g.*, stress-responders need more sustained therapies).

PATHOPHYSIOLOGY OF THE PSORIASIS- STRESS RELATIONSHIP

The underlying pathophysiological mechanisms by which psychosocial stress exacerbates psoriasis have been reviewed recently by Hunter *et al.* [14].

It can be explained by the link between the hypothalamo-pituitary adrenal (HPA) axis and the sympathetic nervous system (SNS), as well as by the release of nerve-related factors from peripheral sensory nerves. A peripheral HPA axis, which may "calibrate" the stress response of the central system has been found in

the skin by several authors [15 - 18].

The nervous system pathway of the stress-psoriasis association has been suggested by Farber *et al.* and is supported by the fact that psoriasis has a symmetrical distribution and psoriatic lesions have been shown to sometimes resolve in areas of denervation [19, 20].

The nervous and immune systems are closely related and neuropeptides and neurotransmitters serve as a link between the systems. As discussed above, neuropeptides and neurotransmitters are released by nerves innervating the skin and influence mast cells and Langerhans cells located in close anatomical vicinity [21].

Psoriatic plaques in high stress group have increased nerve fiber density, altered content of neuropeptides, including calcitonin gene-related peptide (CGRP), substance P and nerve growth factor [22].

The role of mast cells in psoriasis has been reviewed by Harvima *et al.* [23]. Ark *et al.* [24] described that stress-related neuropeptides and neurotrophins, such as corticotropin-releasing hormone (CRH), substance P, CGRP, and nerve growth factor act also as mast cell secretagogues. The role of mast cells in stress-induced exacerbation of psoriasis has however, yet to be fully elucidated.

The stress-induced exacerbation of psoriasis through the HPA axis and the sympathetic adrenal–medullary system pathways (SAM) results in a defective adrenergic response.

Increased urinary epinephrine and decreased serum cortisol were found in psoriatic patients during stressor exposure, with lower baseline salivary and serum cortisol also found in stress-response psoriatic patients [25].

These results disagree with the findings of Buske-Kirschbaum *et al.* [26] using the dexamethasone suppression test, and Karanikas *et al.* [27] using the corticotropin releasing hormone (CRH) in order to stimulate the HPA axis, found little or no difference in the cortisol response between psoriatic patients and normal controls.

Under conditions of stress, the activation of the sympathetic nervous system may

Acne Vulgaris: Psychological State

Lucia Tomas-Aragones^{2,3,*} and Servando E. Marron^{1,3}

¹ Alcañiz Hospital, Zaragoza, Spain

² University of Zaragoza, Zaragoza, Spain

³ Aragon Health Sciences Institute (IACS), Zaragoza, Spain

Abstract: Acne is a multifactorial disorder of the pilosebaceous units. Although many forms of acne can affect all age groups, it is most common in adolescence, when it can be prevalent in up to 80% of the population. Acne vulgaris is often considered a minor disorder, however, it is important to appreciate that the condition can result in severe psychological and social disturbances. Healthcare professionals often underestimate the adverse effects of acne and may lack an empathetic attitude towards the emotional suffering of their patients. It is important to remember that although acne is not a life-threatening disease, it can cause distress and adverse psychosocial consequences such as depression, poor self-esteem, and social phobia. Body dysmorphic disorder and suicide ideation should also be screened for in patients presenting with poor self-esteem and a lack of social interaction. An association between acne and impaired health-related quality of life has also been described. This work aims to highlight the importance of acknowledging the psychological effects of acne and providing patients with effective support. Psychological comorbidities, assessment and treatment options are described.

Keywords: Acne vulgaris, Anxiety, Appearance concern, Biopsychosocial model, Body dysmorphic disorder, Body image, Comorbidity, Coping, Emotional distress, Excoriation disorder, Obsessive-compulsive disorder, Psychological assessment, Psychosocial factors, Psychological intervention, Quality of life, Self-esteem, Self-confidence, Social phobia, Stress, Suicide ideation.

* **Corresponding author Lucia Tomas-Aragones:** Alcañiz Hospital and University of Zaragoza, Aragon Health Sciences Institute (IACS), Zaragoza, Spain; Tel. +34 606 973 09; E-mail:ltomas@unizar.es

INTRODUCTION

Although acne is often considered a minor disorder, it is important to appreciate that the condition can result in severe psychological and social disturbances. However, healthcare professionals often underestimate the adverse effects of acne. This work aims to highlight the importance of acknowledging the psychological effects of acne and providing patients with effective support.

Acne

Acne is a multifactorial disorder of the pilosebaceous units. Although many forms of acne can affect all age groups, it is most common in adolescence, when it can be prevalent in up to 80% of the population [1].

Acne vulgaris (Fig. 1) is one of the most common and visible skin diseases encountered by dermatologists in patients between 15 and 40 years old in the United States [2]. Although acne has usually been considered as an adolescent condition, research and clinical findings from the last two decades have shown that it is also frequent in adult population.



Fig. (1). Moderate acne vulgaris

Acne is not a life-threatening disease, however, it can cause distress and adverse psychosocial consequences such as depression, poor self-esteem, and social phobia. In their research article, Yang *et al.* [3] highlight that acne is an early onset and chronic skin disease, which may influence mental health throughout lifetime, especially in females. Therefore, acne should not be considered simply as a superficial problem in physical appearance. Screening for psychological comorbidities such as major depression and suicide is highly recommended.

Facial acne has been described as a multifactorial disease regarding its pathophysiology and its impact on daily functioning [4, 5]. It has been associated with impaired health related quality of life (HRQoL), and has even been compared with an impact as negative as that of other life-threatening diseases [2, 6]. Some studies have shown that facial acne can have a negative impact on self-image, self-confidence and on the ability to establish social relationships [2, 7]. Due to its visibility, acne has a marked psychosocial impact on both adolescents and adults.

We need to remember that the face is the most conspicuous part of our appearance, and together with speech, the most important elements in communication with others. It is therefore clear that acne on the face is going to affect most youngsters negatively [8].

Health professionals are sometimes dismissive of the psychosocial implications of dermatological disorders and lack an empathetic attitude towards the emotional suffering of their patients [9]. The psychosocial impact of acne has been particularly well-documented in adolescents [10, 12]. Health professionals need to bear in mind that patients who suffer from moderate to severe acne, will probably be having difficulties with body image, self-esteem and social interaction [8, 12].

Psychological Impact of Acne

The psychological impact of acne usually consists of a two-way interaction: visible acne lesions may induce negative affects, which may in turn exacerbate the acne. Adolescence is the period of highest risk, not only for acne, but also for mood swings. It is important to bear in mind the difference between psychological disorders that are induced or exacerbated by acne, and the psychiatric

Body Dysmorphic Disorder – Quick Guide to Diagnosis and Treatment

Diana Radu Djurfeldt*

Psykiatri Sydväst, M46, Karolinska University Hospital, Huddinge, Sweden

Abstract: Body dysmorphic disorder (BDD) is a psychiatric condition with onset in early teens. Incidence and chronicity are about the same as for schizophrenia or obsessive compulsive disorder affecting 1-2% of the population with a chronic progressive course in many cases. A higher prevalence has been noticed among girls. The insight is usually low. Next of kin are often affected by the patients distress and low functioning.

The etiology of BDD is partly explained genetically, partly associated to environmental factors such as abuse or neglect. Neurofunctional imaging and psychological tests reveal an imbalance between global versus local visual processing resulting in high focus on perceiving aberrant details.

Diagnosis of BDD has steadily improved over the last decades with new criteria recently published in the DSM 5. Comorbidity with depression, substance abuse or other anxiety disorders are common and the risk for suicide is high in this group.

Treatment consists of SSRI or clomipramine as first and second line medications. Glutamatergic agents, anticonvulsants and neuroleptic agents are currently studied in BDD. The psychological treatment of choice is cognitive behaviour therapy focusing on exposure and ritual prevention. The effects of treatment, medication, therapy or combined treatments are fairly good.

BDD is a common, severely debilitating disorder with early onset where treatment can improve the symptoms and quality of life. Recognising the diagnosis and providing relevant information give affected patients a fair chance to get qualified help.

Keywords: Body dysmorphic disorder, Buspirone, Cognitive behaviour therapy, Dysmorphophobia, Serotonine reuptake inhibitors.

* **Corresponding author Diana Radu Djurfeldt:** Psykiatri Sydväst, M46, Karolinska University Hospital, Huddinge, Sweden; Tel: 46-8-58585722; E-mail: Diana.Radu-Djurfeldt@sll.se.

CASE STUDY

Lisa just turned 18. She is referred from child- and adolescent psychiatric unit to a specialist unit for OCD-spectrum disorders for further care.

Lisa has a long history of contacts with child psychiatry. Lisa has always been a good student but has missed a lot of schoolwork in high school because of home-sitting. She comes to her first appointment with her parents. Lisa is a quite normal looking girl wearing jeans, a collage jumper a bit too big, has sunglasses and a her hair covering parts of her face. She insists on sitting in a corner turned from the window.

Lisa seems reluctant to be in the doctor's office and most of her story is told by her parents. It appears that Lisa is a happy child who enjoyed playing with other kids. There were no complications during pregnancy or birth and Lisa has not had any injuries or serious diseases. Her problems started in early teens when she became increasingly preoccupied by her weight and body shape as some of her friends. By the age of 15, she developed anorexia and needed to be hospitalized for a period of some weeks. One year later, she was stable in keeping her BMI above 17 and did no longer fulfil the criteria for an eating disorder. Meanwhile she started to be increasingly concerned about her face. Lisa thinks her complexion is too pale and there are hideous red spots all over the face. She is bothered about her high cheekbones, the uneven hairline, the eyebrows and lips also. At the beginning, Lisa used to spend a lot of time scrutinizing her perceived flaws in the mirror; she took photos with her cell phone or looked in all reflecting areas such as car and shops windows to check her defects. Lately though, she rather avoids reflecting areas as the sight she sees is scary and makes her feel really depressed.

Lisa sought help for her spots from many dermatologists. She got some ointments but does not think it helped. She also spends time looking for a cure on internet and talks to other teens bothered about their complexion on blogs and forums. Lisa wants her parents to pay for dermabrasion and would also want to change the shape of the cheek bones and hair line by surgery but the expenses are high.

Lisa engages in time consuming rituals for treating her facial skin. Firstly, she

used to go up one hour earlier to be in time for school but after some months the time needed for treatment, washing, camouflaging, picking the hair line and eyebrows perfectly increased steadily, so Lisa missed school anyway more and more often. She has not been to school more than a few days this last term as she is severely depressed by the thought of her appearance. She rarely leaves home and when doing so takes a lot of time to put on a thorough make up covering the blemishes, fixing the hair and putting on the right clothing to hide all the defects. The makeup needs to be done in a certain way and is the most time consuming part. It happens now more and more often that Lisa still feels disappointed in spite of the make up being done by all rules, and has to wash it all off and redo the process thoroughly. While out or at school, Lisa can see how others pity her for her horrible looks, which is utmost distressing. She is certain that some of her classmates even cry when they see her. Lisa cannot see how she would ever be able to feel better, not as long as the disgusting details in the face are not corrected surgically or by laser. She spends most of her time now on computer chatting or searching for information and cures. She loses hope and thinks a lot about death as an alternative to her severe suffering but assures you she does not want to harm herself and really wants help with her defects. However, the only interest she has in talking to a psychiatrist is to get a referral to plastic surgery to get help.

During her contact with child- and adolescent psychiatry, Lisa was reluctant to medication. She had regular contact with a therapist who tried to treat her for social phobia. However, Lisa did not think this would help and mostly sat off the sessions with quite low interest. She still does not think psychiatry can help but admits that treating her anorexia earlier actually did work and made her concern about weight go away.

BACKGROUND

Dysmorphophobia was described already in 1891 by Enrico Morselli as a phobic disorder focusing on fixation on the idea of one's deformity. About a century later, in 1980, the term dysmorphophobia first made its entrance into the American Diagnostic and statistical manual DSM III among somatophorm disorders described as an "atypical" one. In 1987, in the revised version DSM III-R [1], it changes name to Body Dysmorphic Disorder, the term currently in use [2,

Skin Picking Disorders and Dermatitis Artefacta

Anthony Bewley^{1,2,*} and Padma Mohandas¹

¹ Departments of Dermatology, Whipps Cross University Hospital, London, UK

² The Royal London Hospital, London, UK

Abstract: Dermatologists and patients have long known that skin diseases affect the physical and emotional well-being of a person's existence. Conversely, the psychological state of a person can also affect his/her skin. In this chapter, we set out the nature and basis of some of the dermatological conditions linked to obsessive compulsive disorders [SPD and Acne excoriee] and also take a look at Dermatitis Artefacta, a poorly understood factitious disorder. We present the process of evaluation and care of this vulnerable group of patients, whilst also highlighting the importance of a holistic approach in a multidisciplinary setting.

The skin is well placed to be the focus of tension reducing and emotion regulating behaviours [1]. High levels of anxiety, in dissociative and obsessive compulsive states is perhaps one of the most significant influences in conditions such as Skin picking disorders [SPD] and Dermatitis Artefacta [DA]. Anxiety can also exacerbate primary skin disorders such as Acne with the development of Acne excoriee.

We know that psychological, psychiatric and psychosocial stress affect over 30% of dermatological patients. Assessment of these co-morbidities is therefore imperative in the overall clinical evaluation of the patient. Therefore an integrated multidisciplinary team approach to manage this group of patients leads to better outcomes.

Keywords: Acne excoriee, Artefactual, Compulsive, Dermatitis artefacta, Dermatology, Dissociation, DSM-5, Excoriation, Multidisciplinary team, Neurotic, Obsessive, Picking, Psychiatric, Psychodermatology, Psychosomatic, Skin.

* Corresponding author Anthony Bewley: Departments of Dermatology, Whipps Cross University Hospital, and The Royal London Hospital, London, UK; Tel: (+44)208 539 5522 ext 5248; Fax:(+44)208 535 6897; E-mail:anthony.bewley@bartshealth.nhs.uk.

SKIN PICKING DISORDER

Synonyms

Psychogenic/Neurotic excoriation, Compulsive or Pathological skin picking, Dermatotillomania.

Key Features

- Most prevalent in middle aged women (30-50 years).
- Intense desire to pick/rub or scratch real or imagined lesions.
- Sites affected are usually easily accessible such as the face, upper back, extensors of arms and legs, genitalia and buttocks.
- Anxiety and depression are strongly associated co-morbidities.

Introduction

As many as one fifth of the general population admit to skin picking that result in tissue disruption. Clinically significant SPD however ranges from 5-8% and is characterised by repetitive and compulsive picking of the skin resulting in tissue damage. Patients feel the urge to disturb the skin and find relief in the activity. Attempts to suppress the urge can cause an increase in psychological tension. The picking may begin inadvertently or manifest in a ritualistic fashion. Certain situations may trigger the picking such as looking into a mirror, being alone or stressed. The picking behaviour may be followed by feelings of gratification, relief or pleasure [2].

Some individuals may engage in more automatic picking, which occurs without full awareness of the patient and devoid of any preceding tension. In such circumstances, there tends to be higher levels of emotional dysregulation. This dissociative component is important to recognise, as these patients need stabilisation and a risk assessment for suicide.

Epidemiology

The true extent of this disorder is unknown as few studies have been conducted as to the overall incidence of SPD, however, there is an 8% prevalence in the psycho

dermatology setting. Interpretation of these prevalence rates is complicated by the fact that SPD may be a manifestation of other disorders such as Obsessive Compulsive Disorder (OCD) (to remove contaminants), genetic disorders like Prader Willi syndrome and Body Dysmorphic Disorder (BDD). Although the condition can present at any age, the peak ages of presentation seem to be between 30 to 50 years. There is a distinct female preponderance.

Clinical Features

Lesions may arise from pre-existing skin problems like acne or urticated papules or they may be created *de-novo*. Research conducted by Wilhelm *et al.* [3] showed that the most common sites of involvement were the face (Fig. 1) and back, the “butterfly sign” is a distinctive feature whereby the inability of the patient to reach the central areas of the back results in peripheral skin trauma resembling that of butterfly wings [4]. Many patients use their fingernails to pick or squeeze lesions. A significant number also use implements such as tweezers and needles. Lesions may range in size from a few millimetres to several centimetres. In extreme cases of SPD, the individual may gouge as deep as the muscle and arteries. Morphologies vary from superficial erosions to deep ulceration. Post inflammatory hypo or hyper pigmentation is common. On the scalp, there may be broken hairs or areas of alopecia. Women may sometimes report worsening of symptoms pre-menstrually.

Psychiatrically, these patients are a heterogeneous group most commonly expressing obsessive compulsive traits [5]. In some, picking may be an expression of a generalised anxiety disorder or depression. When stressed or tensed there may be anxious and restless picking at any interruption on the surface of the skin, with the activity frequently occurring at night or when the patient is unoccupied [6]. Psychosocial stressors must therefore be enquired upon when taking the history.

From a psycho dynamic perspective, there are often histories of difficult childhoods with emotional rejection and harsh parenting. Individuals may lack self-confidence and be overly sensitive to criticism. A percentage also have anger management issues which is displaced into self-destructive picking.

Understanding the Challenges in Management of Delusional Infestations

Mona Malakouti^{1,2} and Jenny Murase^{2,3,*}

¹ Chicago Medical School, Rosalind Franklin University of Medicine and Science, IL, USA

² University of California San Francisco, Department of Dermatology CA, USA

³ Palo Alto Foundation Medical Group, Department of Dermatology, Mountain View, CA, USA

Abstract: Delusional infestation (DI) is a psychodermatologic disorder characterized by the presence of a fixed, false belief that one is infested with living or non-living organisms. Patients with DI also endorse associated abnormal cutaneous symptoms such as crawling, biting or itching. DI can be extremely debilitating, as patients seek treatment and resort to self-injurious behaviors to eliminate fictional pathogens. Thus, patients may present with skin changes secondary to skin picking and excoriations. Patients with DI most often seek the help of dermatologists, because they are unable to appreciate a psychiatric etiology for their disorder; dermatologists are key to establishing both treatment and psychiatric referral for these challenging encounters. Having an informed and optimized approach in handling DI patients is vital, as clinical interactions with these patients could otherwise be unproductive and unpleasant. With good therapeutic rapport and a strong doctor-patient relationship, dermatologists may implement effective treatment with newer, second-generation anti-psychotic medications or pimozide. In this chapter, the clinical presentation, diagnostic and interpersonal approach, as well as the treatment of DI, are reviewed.

Keywords: Anti-psychotics, Delusion, Delusional infestation, Delusional parasitosis, Infestation, Parasitosis, Pimozide.

* **Corresponding author Jenny Murase:** Palo Alto Foundation Medical Group, Department of Dermatology, 701 East El Camino Real (31-104), Mountain View, CA 94040, USA; Tel: 650-934-7676; Fax: 650-934-7696; E-mail: jemurase@gmail.com.

INTRODUCTION

Delusional infestation (DI) is a condition characterized by a fixed, false belief that one is infested with animate or inanimate matter in the absence of any objective evidence [1]. The nomenclature of this condition has changed over time to encompass the evolving definition and presentation of patients with this type of monosymptomatic delusional hypochondriasis. DI was first introduced in the late 1890s as ‘acarophobia’ [2, 3], and followed by similar ‘-phobia’ ending terms, such as parasitophobia. These terms were considered to be a misnomer given that phobias are on the spectrum of an anxiety rather than delusional disorder. To reflect the delusional aspect of the disorder, delusional parasitosis or delusions of parasitosis have been preferentially used in the last half-century [4]. However, recent literature has recommended a shift of the nomenclature to delusional infestation given that patients may describe non-parasitic infesting pathogens [5, 6].

DI is a relatively well-known psychodermatologic condition that may be one of the most challenging encounters a dermatologist may face. On average, it is estimated that dermatologists will encounter two to three patients every five years, or at the very least one patient in their career [7]. DI patients are more apt to seek the help of a dermatologist rather than a psychiatrist, since they are unable to recognize an underlying psychiatric etiology for their condition. This proves difficult for dermatologists, because without insight to their disease, DI patients often reject effective antipsychotic medications and psychiatric referrals.

Even though the optimal management of these patients would also involve a psychiatrist, dermatologists may face this difficult task alone. To effectively handle these patients, an optimized approach to their care and management are of utmost importance. This chapter aims to summarize salient points regarding the clinical presentation, diagnosis, interpersonal approach, and treatment of patients with DI.

CLINICAL PRESENTATION

The classical DI patient is frequently a middle-aged to elderly woman with limited social interactions and no prior history of mental illness. Other classical cases may

involve elderly men or women with comorbid dementia or other organic brain disorder, and regular recreational drugs users [8]. While there is a female predominance observed in those over the age of 50, there is an equal gender distribution in patients younger than 50 years old.

DI patients most classically endorse infestation with a parasite; however, they may also believe other living organisms, such as fungi, bacteria, worms, or other insects, are the infesting agents [9]. In addition to the infestation, patients may describe abnormal sensations such as crawling, biting, or stinging that they attribute to cutaneous pathogens in the absence of any empirical evidence substantiating their presence. The onset of DI is usually insidious and chronic in duration [10], although some patients may have episodic or transient symptoms.

A smaller subset of patients may report infestation with inanimate objects such as filaments, fibers, hairs or other particles, which is known by some as Morgellons disease [11, 12]. Since 2002, much attention has been given to Morgellons disease, with information readily available online and supported by a relatively large community of patients. Followers of Morgellons disease espouse an infectious etiology rather than a psychologic cause for this dermatopathy [13]. As a provider, knowing of Morgellons can be helpful, as patients may present with a self-diagnosis of this condition having studied Internet resources.

Occasionally, patients may cohabit with another person sharing the same delusion of infestation. This phenomenon is known as folie à deux, which can occur in 5 to 15% of cases [14, 15]. Usually one person experiences the delusion first, and induces the delusion in the other [14]. It is most often observed between husband and wife, probably owing to one attempting to show devotion and support for the other. Recovery typically involves and is dependent on treatment of both cohabitants.

DI patients can be very detailed; they may offer particulars regarding the shape, color or movement of these imaginary pathogens, along with the initiating event or perceived cause of the infestation. Frequently, patients endorse transmission from other humans, plants, infested homes and to a lesser extent animals or pets. In many cases, patients also believe their relatives to be infested. Thus, patients

Living with Psoriasis: Managing the Life Impact of Psoriasis – Practical Tips to Use in Consultation

Christine Bundy¹, Alexandra Mizara² and Sandy R. McBride^{2,*}

¹ *The Dermatology Research Centre and Manchester Centre for Health Psychology, The University of Manchester, Manchester Academic Health Science Centre, Manchester, UK*

² *Department of Dermatology, Royal Free NHS Foundation Trust, London, UK*

Abstract: Psoriasis can affect every aspect of life – relationships, social life, lifestyle and work and is associated with increased levels of depression and anxiety. Understanding the beliefs, behaviours and emotions of people with psoriasis is essential to formulating effective and appropriate management plans with patients.

Psychological factors in people with psoriasis, such as alexithymia, anticipation of harm and stigma together with time constraints in clinic and skin-focused consultations, can lead to distress and life-impact going un-recognised and untreated. There is some evidence that treating distress can have a positive impact on the severity of psoriasis, and that distress in the form of worry is a major determinant of the outcome of treatment.

Screening for quality of life impact and distress in clinic using relevant questionnaires is a useful tool to identify patients in need of further support, and also provides a trigger to initiate discussion. A patient-centred consultation with setting of agendas for patient and clinician is an efficient way of targeting consultations. Questioning style in clinic is key to eliciting relevant responses which guide treatment decisions and inform treatment goals. Setting of patient-derived treatment goals and step-by-step mini-targeted approach to reaching the final goal ensures response to treatment is accompanied by improved life-impact.

Communicating measures of distress, quality of life and patient-derived treatment goals to general practitioners provides an educational tool and will raise the standard of care

* **Corresponding author Sandy R McBride:** Department of Dermatology, Royal Free NHS Foundation Trust, London NW3 2QG UK; Tel +44 2078302376; Fax +44 2078302247; E-mail: sandy.mcbride@nhs.net

for people with psoriasis.

Keywords: Alcohol, Alexithymia, Anti-depressant, Anxiety, Beliefs, Cognitive-behaviour-therapy, Consultation, Coping, Depression, Distress, Hypnosis, Life-impact, Lifestyle, Obesity, Psoriasis, Psychology, Shame, Smoking, Stigma, Suicide.

“Each morning, I vacuum my bed. My torture is skin deep: there is no pain, not even itching.... Lusty, though we are loathsome to love. Keen-sighted, though we hate to look upon ourselves. The name of the disease, spiritually speaking, is Humiliation.” John Updike [1].

CASE STUDY

A 39-year-old man with psoriasis attends a dermatology clinic for the first time. He has had psoriasis since the age of 9 years. His PASI (Psoriasis Area Severity Index) score is 18.9 (severe) and his DLQI (Dermatology Life Quality Index) is 3 (minimal life-impact). The Dermatologist tells him, in her experience, it is unusual for someone with his severity of psoriasis, for it not to have a significant effect on their life. The man starts to cry. He has never been in a relationship. He has no social life. He has been in the same job since leaving school because he is too embarrassed to go to a job interview with psoriasis on his hands and face. He merely exists, as he has done for the last 30 years. He has seen several General Practitioners over the last 30 years, but his distress and the impact of his psoriasis on his life has not been recognised.

The Dermatologist who saw him in clinic was able to determine the major effect this gentleman's psoriasis was having on his life and formulate an appropriate management plan. In the consultation, she used techniques based on an understanding of psychological factors affecting people with psoriasis in order to engage the patient and identify his needs and wishes and plan his care based on managing the whole person not just his skin.

In this Chapter, we share our joint learning about people with psoriasis, and how this has changed our approach to consultations and management planning.

Illustrations are obtained from postcards distributed by the See Psoriasis: Look Deeper collaboration to people with psoriasis. The post cards were entitled ‘Dear Psoriasis...’ and respondents were asked to complete them either with words or images [2].

INTRODUCTION

In order to understand the full impact of psoriasis on an individual’s life it is necessary to question the beliefs, emotions and behaviours of the person behind the psoriasis. Focused questioning can uncover the effect their psoriasis may have on work, relationships, social life and well-being and what is important to the patient in terms of treatment. This insight can lead to more appropriate treatment choices, improved adherence to medications and an opportunity to address the wider issues facing the individual. Communicating this understanding to patients demonstrates empathy, optimises adherence and improves satisfaction with care. Furthermore, communicating this information to the Primary Care Physician will model whole person care which can be replicated in future encounters with people with psoriasis.

PSYCHOLOGICAL FACTORS IN PSORIASIS

Key Beliefs

Beliefs and emotions drive human behaviour. Illness and treatment beliefs can explain self-management and, in particular, adherence to treatment. What people believe about (i) the disease name and associated symptoms of psoriasis make up the identity, (ii) what people believe caused psoriasis or the subsequent flares can indicate the accuracy of knowledge people have, (iii) the effects and outcome of psoriasis (consequences) indicates optimism or pessimism about living with the condition, (iv) how long they perceive the duration of psoriasis and its likely trajectory may flag up vulnerability to depression or inaccurate understanding and (v) how much they believe they, or the treatment they are receiving, can control or cure their psoriasis are particularly important signposts to likely coping strategies that may be used (see below) [3, 4].

People learn about psoriasis from a variety of sources, some helpful and accurate,

Psychological Treatments for Dermatological Conditions

Andrea W.M. Evers*, Saskia Spillekom-van Koulil and Sylvia van Beugen

Leiden University, Institute of Psychology, Health, Medical and Neuropsychology Unit, Faculty of Social and Behavioral Science, Leiden, and Radboud University Medical Centre, Department of Medical Psychology, Nijmegen, The Netherlands

Abstract: The impact of dermatological conditions on a patient's life is frequently underestimated. Patients with skin conditions experience several physical complaints, including itch, pain and fatigue. Furthermore, in comparison to the general population, patients report a decreased psychological well-being, lowered quality of life and feelings of stigmatization and shame. Psychological treatments are widely used in addition to regular dermatological treatments to improve physical and psychological functioning of patients with chronic skin conditions. These treatments are usually aimed at changing the psychosocial factors that can influence the onset and/or course of skin conditions, such as dysfunctional coping behaviors, itch-scratching problems and stress. There are unimodal interventions in which single treatments are used, for example psychoeducation or relaxation exercises, and multimodal treatments in which a variety of different interventions are applied based on cognitive-behavioral therapy and self-management principles. Furthermore, a distinction can be made between interventions that focus primarily on skin-related psychosocial problems, interventions that focus on itch-scratching problems, and interventions that are focused on psychiatric problems in the dermatological practice. This chapter gives an overview on the psychosocial factors relevant for dermatological conditions, relevant diagnostic methods and the content and scientific evidence of specific psychological treatments in these different categories.

* **Corresponding author Andrea W.M. Evers:** University of Leiden, Institute of Psychology, Health, Medical and Neuropsychology Unit, Faculty of Social Science, PO Box 9555 / 2300 RB Leiden / The Netherlands; Tel: +31-71-527 6891; Fax: +31-71-527 3619; E-mail: a.evers@fsw.leidenuniv.nl.

Keywords: Cognitive-behavioral therapy, Dermatological conditions, Habit reversal, Itch-scratching problems, Psychological treatment, Stress management.

INTRODUCTION

The impact of skin conditions on a patient's everyday life is frequently underestimated. Although the influence of psychological factors on the skin has been recognized since a long time, systematic research on psychological factors and treatments has only begun in the last decades. Research shows that people with skin conditions experience more physical symptoms, such as itch, pain and fatigue than the general population [1]. Patients additionally report more anxiety, tension and depressive feelings, and experience social restrictions [2 - 4]. Psychological treatments have consequently been regularly proposed as possible added benefit for the regular dermatological treatments. Based on the existing research evidence focusing particularly on highly prevalent chronic skin conditions, this chapter focuses on the psychosocial factors relevant for dermatological conditions and their impact on daily life, relevant diagnostic methods and psychological treatments.

PREVALENT PROBLEMS IN PATIENTS WITH DERMATOLOGICAL CONDITIONS

Skin conditions are generally characterized by their fluctuating course and they are often accompanied with physical complaints such as itch, desquamation or pain. Research shows that chronic skin conditions, such as psoriasis and eczema, are accompanied by physical, emotional and social problems and can lead to multiple restrictions in everyday life [5]. Patients report decreased psychological well-being and lower quality of life compared to the general population [3, 6, 7]. For 20 to 40 percent of this group, symptoms are so severe that they are considered a risk group for long-term adjustment problems which require further treatment [4]. The decreased psychosocial well-being can in turn negatively affect the skin condition; for example, patients with psoriasis who also have a high level of psychological distress benefit less from treatments such as phototherapy [8].

Patients with chronic skin conditions often state that 'itch is worse than pain'. Accordingly, itch is the most prominent complaint in most skin conditions. More

than half of the patients with chronic skin conditions report to be experiencing symptoms of itch [1, 9]. The definition of itch, 'an unpleasant sensation provoking the desire to scratch', implies the strong correlation between itch and scratching. Frequent scratching can however lead to skin damage which can in turn aggravate skin conditions [9]. In many patients, scratching leads to relief in the short-term, while feelings of helplessness, shame and guilt play a big role in the long-term. Reactions from the environment towards the scratching behavior ('Could you please stop scratching yourself') can increase these feelings and cause irritation and tensions. Many patients especially suffer from itch at night, leading to sleep problems, chronic fatigue, concentration problems and increased irritability during the day. Over time this can lead to increased avoidance of everyday activities and in the longer term to depressive moods [3]. Accordingly, patients with chronic itch report lower psychological and social well-being than the general population [2 - 4]. Besides itch, skin conditions can also be accompanied by pain [1], for example in patients with chronic ulcers. In addition, eczemas or open wounds caused by scratching can also cause painful fissures in the skin.

Patients with chronic skin conditions additionally report more restrictions in social activities, work and leisure than the general population. Multiple factors can play a role in this. Medical treatments of skin conditions are often quite time intensive, for example when an ointment has to be applied to the whole body several times a day. Additionally patients report feeling restricted by the effect of ointments on their clothes and by the smell of certain ointments such as coal tar ointments. Due to the visibility of skin conditions, many patients experience social stigmatization, shame and social anxiety [3, 10, 11]. A study by Ginsburg and Link [12] revealed that about 20 percent of patients with psoriasis experienced being sent away from sports, hairdressers or swimming facilities because of their skin condition. However, the proportion of patients that suffer from 'the experience of stigmatization' is far greater. Indeed, Lu *et al.* [13] found that about 80 percent of patients with psoriasis and atopic eczema felt stigmatized by others because of their skin disease at least once, 30 percent of which severely. The experience of stigmatization is one of the strongest determinants of perceived restrictions in everyday life [14, 15] and can lead to decreased self-confidence and feelings of shame. These feelings can cause people to isolate themselves and avoid being in

Psychoanalysis in Psychodermatological Diseases

Jorge C. Ulnik*

Universidad de Buenos Aires. Facultad de Psicología. Cátedra Fisiopatología y Enfermedades Psicosomáticas Buenos Aires, Argentina. Asociación Psicoanalítica Argentina. Universidad de Buenos Aires. Facultad de Medicina. Departamento de Psiquiatría y Salud Mental. Buenos Aires, Argentina

Abstract: From a psychoanalytical point of view, almost all dermatological disorders can be considered psychodermatological disorders, because psychoanalytical conception of psychosomatics is not based on the absence of an organic aetiology, or on the real somatic condition of the disease. In all of them – either self inflicted or not, delusional or real, chronic or acute - a psychodynamic approach can be made and can turn out useful, depending more on the patient than on the disorder itself.

Psychoanalytic evaluation can contribute to the dermatologic practice at many different levels: a) establishing the level of psychological/psychiatric functioning during the consultation; b) typifying the kind of unconscious conflicts and emotions that the patient expresses through his/her complaints and symptoms; c) detecting the defence mechanisms that the patient uses to cope with reality, with stress and with his disease; d) choosing the treatment taking into account the unconscious preferences and meanings of the prescriptions; and e) giving skills to improve doctor-patient relationship.

What the psychoanalyst hears in the doctor's consulting room gives him the possibility to infer that there are unconscious factors which play a role in the motive and time of consultation, the self-destructive patterns of behaviour that worsen the disease, the kind of complaint or suffering privileged by the patient, the acceptance or rejection of a treatment or a medicine and even the location of the lesions.

Keywords: Allergy, Attachment, Doctor-patient relationship, Ego-skin, Emotional expression, Medical psychology, Psoriasis, Psychoanalysis, Psychodermatology, Psychodynamic psychotherapy, Psychosomatics,

* **Corresponding author Jorge C. Ulnik:** Malabia 2255, 2°B, (C1425) Ciudad de Buenos Aires, Argentina; Phone: + 54 11 4 832 5798, Fax: + 54 11 4832 5798; E-mail: jorgeulnik@gmail.com.

Psychosomatic diseases, Self-injuring, Skin.

INTRODUCTION

The Skin Patients In Session: Some Transference-Counter Transference Events

A dermatologist referred Magdalena to a psychoanalyst because she was not improving of a chronic eczema, with location in various parts of the body but mainly on her face.

At the beginning of the treatment, her speech was centered on physical complaints, mostly itching and edema. She blushed at some interpretations offered by her psychoanalyst. Many times she stands up to fetch moisturiser, ready to use in a small bottle, and puts it on her face to soothe her itching. Once she has done this, she lies back on the couch and continues talking as if there had been no interruption whatsoever.

Peter, a psoriasis patient, always leaves silver scales of epidermis which stand out against the black leather of the couch. Could we term these phenomena “Skin in psychoanalysis” [1]?

The psychoanalyst would probably reply “no”. Peter’s psoriasis is genetically determined; his skin comes off in small pieces and there is nothing he can do about it. Magdalena, on the other hand, is allergic and itching is the consequence of her skin disease.

However, the psychoanalyst is feeling upset: he must clean the couch before the next patient arrives; he even considers the possibility of getting a cover for it to be used whenever Peter comes to therapy. While he washes his hands he feels he can hardly keep himself from telling Magdalena not to touch her face during the session. He is feeling upset and anxious: he cannot think “in depth”. He might even feel itchy!

Might not his feelings be attributed to counter-transference? Do somatic conditions pose a limit to psychoanalysis?

Peter has an appointment with the dermatologist after his session. While he undresses for the physical exam he leaves a pile of scales on the floor. The dermatologist asks him how he is doing and Peter, pointing to the scales on the floor, replies, “look, there I am”.

What Peter sees in his own scales is himself, as if he was another who leaves traces everywhere. This other “presence” is disavowed by his dermatologist and his psychoanalyst, who just Hoover the floor, as Peter’s wife always does, and put Peter’s “other me”, which, incidentally, is torn to pieces, in the rubbish bin.

I learned this from a patient with psoriasis who spoke of her divorced mother saying “If I moved in with Dad, Mum would fall to bits”, while her skin came off in small pieces.

Another one, usually splits herself: One self is the woman: a woman who wears women’s clothes, goes to the hairdresser, and dedicates time to her makeup. The other self is the psoriasis patient: the one who wears “unisex” clothes of light colours, never goes to the hairdresser, and wastes a lot of time moisturizing herself and hiding her body.

“Medical scientific papers claim that one third of the population who consults with a dermatologist suffers from psychological problems and yet, at the same time they claim that cognitive-behavioural therapy is the treatment of choice. Is it that psychoanalysis has no say within this field? Indeed, there are several multidisciplinary societies of psychiatry and dermatology in the United States and in Europe where the voice of psychoanalysis can barely be heard. However, in our present cultural context, where interdisciplinary work is essential and where a piercing or a tattoo grant a feeling of identity to youths whose subjectivity is at risk, the issue of the skin seems to be receiving a lot of attention and we psychoanalysts must bear in mind that Freud used to consider it “the erogenous zone par excellence”, and that it was also the entrance and the exit door for many emotions and situations which mark us” [1].

WHAT IS PSYCHOANALYSIS?

Since there are many current psychoanalytic schools of thought and different

Building a Psychodermatology Clinic

Anna Zalewska-Janowska^{1*}, Sol-Britt Lonne-Rahm^{2,3}, Sten Friberg⁴ and Nordlind Klas^{3,5}

¹ *Psychodermatology Department, Medical University of Lodz, Poland*

² *Department of Dermatology, Mälarsjukhuset, Eskilstuna*

³ *Dermatology and Venereology Unit, Department of Medicine, Solna, Karolinska Institutet, Stockholm*

⁴ *Psykiatri Nordväst, Karolinska University Hospital, Solna*

⁵ *Department of Dermatology, Karolinska University Hospital, Solna, Stockholm, Sweden*

Abstract: There is a need for a holistic view when treating dermatological patients. Dermatologists believe that psychiatric disorders are substantially less frequent than they actually are in many skin conditions. In many skin conditions the frequency of psychiatric disorders are underestimated by dermatologists. Diagnosing psychodermatological disorders, particularly depression, could in some cases, be lifesaving. In at least university teaching hospitals, psychodermatology clinics should function on a regular basis. The most natural location of such a clinic is within an ordinary dermatology clinic containing an interdisciplinary team of a dermatologist, psychiatrist, psychologist, social worker and experienced nurse. Instruments used include somatic examination, laboratory tests, and radiology facilities such as magnetic resonance, and neurophysiological examination. Treatment is composed of skin handling, emollients, hydrocolloid dressings, ultraviolet light therapy, cognitive behavioural therapy, and/or pharmacotherapy using antidepressants or antipsychotics. These psychodermatological clinics, depending on refunding, may not be lucrative from the refunding perspective but they offer integrative patient care and may limit number of hospital admissions and improve the quality of life of these patients, this being the ultimate purpose.

* **Address correspondence by Anna Zalewska-Janowska:** Psychodermatology Department, Medical University of Lodz, 251 Pomorska, 92-213 Lodz, Poland; E-mail: Anna.Zalewska-Janowska@umed.lodz.pl

Keywords: Anxiety, Clinic, Depression, Enquiries, Instruments, Laboratory tests, Outcome, Psychodermatology, Research.

BACKGROUND

The Need for a Psychodermatology Clinic

Dermatologists generally have a limited time for consultation by their patients, by tradition the flow of patients being high. In addition, the quality of the consultation from a holistic perspective may be limited, skin lesions being so visual. The skin disease may be worsened by psychological factors such as stress and depression and, on the other hand, the skin disease per se may lead to stress and depression due to influence on quality of life. It is important to identify which patients could receive more benefit from psychiatric intervention.

Dermatologists have a fairly good view about the impact of skin conditions on the quality of their patient's life [1]. On the other hand, in many skin conditions the frequency of psychiatric disorders are underestimated by dermatologists [1, 2]. The prevalence estimates of psychiatric morbidity in dermatological outpatients range from 21 to 43% [2, 3].

Thus, anxiety, depression, body dysmorphic disorder (BDD) are often encountered. Depression in an outpatient dermatology setting has been estimated at having a prevalence of 34% and being comorbid with common skin disorders, including acne, atopic dermatitis, psoriasis, pruritus and urticaria [3]. In the study by Gee *et al.* [3] most physicians thought that they were capable to diagnose psychocutaneous disease, however, very few felt comfortable starting treatment with psychotropics or believed themselves being successful treating such conditions.

A substantial number of dermatologists are lacking training in psychodermatology, thus, many patients with psychocutaneous disorders are left untreated. Many patients are often resistant to psychiatric intervention and when they are advised to see psychiatry, this often leads to termination of the treatment [3]. Thus, the major responsibility to recognize and treat psychiatric disorders is up to the treating dermatologist.

An added value to treating primary psychiatric disorders is the improvement of associated skin disorders. Accordingly psychiatric disorders due to skin disorders may also require treatment [4].

Assessing degree of stress, depression and anxiety using a simple 0-10 VAS scale before and during treatment can be a rough indicator of treatment progress. In addition, diagnosing the most common psychodermatological disorders, particularly depression, could in some cases, be lifesaving.

Psychodermatology Clinics

There are several examples of psychodermatology clinics [see, *e.g.*, 5 - 10]. Often the patients are seen by a combined team with a dermatologist/psychiatrist or psychologist. This is of particular importance since patients with primary psychodermatological disorders often do not want to have a psychiatric referral. The need for a psychodermatology multidisciplinary team for patients with dermatitis artefacta and artefactual skin disease from the initial consultation was pointed out by Mohandas *et al.* [6] at their regional psychodermatology clinic at the Royal London Hospital. With this early contract between the patient and both the dermatologist and psychiatrist, the clinical assessment could then be run over time.

In common for psychodermatology clinics is the difficulty to perform outcome based comparative studies.

A substantial number of patients default follow-up. Thus, most reports from these clinics in a retrospective way describe patients that have been admitted/treated by the clinics.

At the psychodermatology clinic in Singapore [5], the most common diagnosis among patients with primary psychiatric disorders was delusional infestation. 57.9% of the patients were compliant to the prescribed therapies, psychiatric medications or further psychiatric reviews. At the psychodermatology clinic in Manipal, India, the leading primary diagnosis was psoriasis, while the leading primary psychiatric disease was neurotic excoriations [7]. Thirty percent of the patients had stressors at the onset of their disease. At the Hadassah–Hebrew

SUBJECT INDEX

- A**
- Acne 33, 35, 60, 61, 62, 63, 64, 65, 66, 67, 68, 72, 73, 75, 77, 78, 79, 80, 81, 100, 102, 107, 170, 224, 226
 - adverse effects of 60, 61
 - burden of 66, 68
 - facial 62, 67
 - impact of 74, 75
 - psychological effects of 60, 61
 - Acne Disability Index (ADI) 75
 - Acne excoricee 100, 104, 107, 109
 - Acne lesions, visible 62
 - Acne patients 67, 68, 70, 71, 72, 73, 78
 - Acne severity 64, 73
 - Acne symptoms 75
 - Acne treatment, effective 68
 - Adalimumab 37, 39, 42, 43, 146
 - Addressing Distress 155
 - Adjunctive treatment 152
 - Adolescence 60, 61, 62, 64, 65, 68, 81
 - Adolescent psychiatric unit 89
 - Adolescent psychiatry 90
 - Adolescents 62, 63, 64, 65, 68, 70, 170, 174, 175, 177, 178
 - Alcohol intake in psoriasis 41
 - Alexithymia 135, 136, 138
 - Alopecia areata 35, 66, 197, 198, 202, 214
 - Analysand 189
 - Anti-androgen treatment 108
 - Anti-depressant 136, 149
 - Antipsychotic medications 119, 126, 127, 128, 129, 130
 - effective 119, 130
 - traditional 130
 - Anti-psychotic medication therapies 126
 - Antipsychotics 118, 126, 127, 228
 - Anxiety 25, 26, 28, 31, 32, 33, 34, 35, 36, 37, 38, 41, 42, 43, 60, 65, 66, 67, 68, 69, 70, 71, 76, 77, 78, 79, 80, 81, 94, 100, 101, 103, 106, 108, 109, 115, 119, 122, 129, 135, 136, 147, 148, 149, 150, 151, 152, 153, 168, 171, 172, 176, 195, 197, 202, 207, 210, 216, 224, 225, 227, 229
 - assessed 71
 - associated 109
 - existential 65
 - general 66
 - improved 33, 34
 - increased 171
 - interpersonal 35, 37
 - social-evaluative 77
 - state 227
 - Anxiety depression score 154
 - Anxiety-provoking situations 80
 - Anxiety scores 150
 - Anxiety symptoms 67, 69, 76
 - Appendixes 201
 - Approach 186, 190, 217
 - psychoanalytic 190
 - psychodynamic 186, 217
 - psychosomatic 190, 198

- Assessment 60, 75, 77, 96, 100, 140, 176, 200
 psychometric 75
 Assessment of psychosocial morbidities 104
- Atopic dermatitis 9, 10, 13, 25, 31, 33, 35, 37, 66, 72, 198, 224, 226
 Atopic dermatitis patients 13
- Atopic eczema 169, 171, 172, 174, 175, 176, 178
- Atypical antipsychotics 126, 128, 129, safer 126
- Autogenic training 81, 175
- B**
- BDD 70, 92, 93, 94, 95, 96
 Biological agents 34
 Biological treatments 34, 37, 39, 42
 Body Image disturbance questionnaire (BIDQ) 76
 Body mass index (BMI) 89, 147
 Boehringer Ingelheim 44
 Brain-derived nerve factor (BDNF) 9
- C**
- Calcitonin-gene related peptide (CGRP) 5, 7, 8, 10, 27
 Cardiff acne disability index (CADI) 75
 Cardio-vascular disease (CVD) 143
 Care, 43, 63, 89, 96, 100, 119, 124, 135, 136, 137, 158, 172, 176, 179, 223, 228
- daily skin 172
 effective patient-centred 158
 integrative patient 223
 local skin 228
- psychological 179
 Catecholamines 5, 7, 8, 10, 11
- Cells 3, 4, 6, 7, 8, 9, 10, 11, 27, 28, 214
 glandular 7, 9
 immune 6, 7, 8
 mast 4, 6, 9, 27
- Central nervous system (CNS) 3, 122, 171
- Child psychiatrist 109
 Child psychiatry 89
 Children and adolescents 170, 174, 175, 177, 178
 Children psychoanalysis 190
 Children's dermatology life quality index (CDLQI) 173
 Chromogranin 6
 Chronic immune-mediated genetic disease 25
 Chronic skin conditions 37, 167, 168, 169, 170, 172, 173, 174, 175, 178
 Chronic skin diseases questionnaire 174
 Clinic 65, 104, 124, 135, 136, 153, 154, 223, 224, 225, 226, 228
 joint psycho-dermatology 104
 psychodermatological 223
 quality of life impact and distress in 135, 154
 specialist acne 65
- Clinical psychology 156
 Cognitive behavioral 176, 177

- treatments 176, 177
- Cognitive -behavior therapy (CBT) 42, 80, 88, 95, 96, 106, 109, 115, 136, 152, 153
- Communication of patient goals 158
- Co-morbidities, concomitant psoriasis 143
- Comorbidities, psychological 60, 62, 73
- Component, strong psychological 110
- Condition, psychodermatologic 119
- Conflicts and Patient's Motivation 211
- Consultation 113, 135
 - patient-centred 135
 - psychiatric 113
 - skin-focused 135
- Conversion disorder patients 206
- Convoy therapeutics 44
- Coping strategies 67, 78, 139, 141, 153, 174, 179, 211
- Corticotropin-releasing hormone (CRH) 5, 11, 27, 28
- Cutaneous dysesthesia 103, 123
- Cutaneous lesions 10
- Cyclosporine 41
- D**
- Defective adrenergic response 27, 28
- Defence mechanisms 186, 200, 211, 217
- Delusional infestation 103, 113, 118, 119, 130, 170, 178, 179, 225, 226, 227, 228, 229
 - skin features 113
- Delusional patient's symptoms 124
- Delusions 118, 120, 122, 125, 128, 179
 - parasite 227
- Depressed patients 36
- Depression 25, 30, 31, 35, 36, 37, 38, 41, 42, 43, 60, 62, 66, 67, 68, 69, 70, 71, 76, 77, 78, 82, 88, 93, 94, 95, 96, 101, 102, 103, 104, 106, 108, 109, 115, 122, 135, 136, 137, 138, 148, 149, 150, 153, 155, 175, 176, 195, 197, 223, 224, 225, 227
 - associated 106
 - improved 43
 - major 62
 - untreated 95
- Depression scale 76, 229
- Depression score 42, 146, 152
- Depressive disorders 35, 65, 66, 71, 74, 109
 - major 35, 71
 - persistent 35
 - possible 74
 - substance/medication-induced 35, 71
 - unspecified 71
- Depressive symptoms 35, 71, 73, 76, 94, 127
- Dermatological conditions, primary 112, 113
- Dermatological consultation 179
- Dermatological diseases 13, 25, 41
- Dermatological interventions 173
- Dermatological outpatients range 224
- Dermatological practice 167, 174, 178, 179
- Dermatological treatments 167, 168, 173, 176, 217

- regular 167, 168, 176
- Dermatologic disease 123, 196, 197
 - primary 123
- Dermatologic treatments, traditional 193
- Dermatology clinics 93, 104, 110, 136, 223, 226
 - common 226
 - dedicated psycho 104
 - general 110
 - ordinary 223, 226
- Dermatology life quality index (DLQI) 29, 73, 74, 104, 136, 146, 154, 158, 173, 213, 229
- Dermatology setting 110, 115, 224
 - dedicated psycho 115
 - outpatient 224
 - specialist psycho 110
- Diagnose psychocutaneous disease 224
- Diagnosis 197, 200
 - dermatologic 200
 - psychoanalytic 197
 - somatic disease 197
- Diagnostic criteria 93, 94
- Disease 6, 26, 29, 30, 31, 35, 36, 38, 40, 41, 60, 62, 63, 67, 74, 77, 82, 89, 91, 104, 119, 121, 126, 127, 136, 154, 173, 176, 186, 187, 193, 194, 199, 200, 202, 204, 207, 209, 211, 212, 214, 216, 217, 218, 225, 229
 - cardiac 31, 127
 - cardiovascular 38, 41
 - life-threatening 60, 62
 - organic 204
 - psycho-cutaneous 40
 - psychosomatic 187
- Disease severity 33, 36, 146, 171, 175, 176
 - decreased 176
 - reduced 175
 - reported reduced 175, 176
- Diseases severity 175
- Disfiguring disease 26, 31
- Disorder 3, 60, 61, 62, 69, 70, 71, 88, 89, 91, 92, 94, 100, 101, 102, 109, 110, 112, 115, 118, 119, 122, 127, 178, 179, 186, 204, 214, 215, 217
 - dermatological 62, 186, 204, 217
 - eating 89, 91, 92, 94, 112
 - factitious 100, 110, 178, 179
 - minor 60, 61
 - neurologic 127
 - obsessive-compulsive 60, 69, 71, 115, 122
 - psychodermatologic 118
- Distress 9, 32, 40, 41, 42, 43, 68, 71, 76, 77, 80, 92, 93, 94, 135, 136, 139, 141, 144, 146, 148, 149, 152, 153, 154, 155, 170, 189
 - discussed 153
 - financial 32
 - high levels of 93, 144
 - identifying 154
 - psychiatric 9
 - psychological 41, 42, 68, 144, 152, 170
 - reducing psychosocial 80
 - relieve 43
- Distress improve psoriasis 149
 - strong 118
- Drugs, psychotropic 9

E

Early/naive psychodermatology
platforms 226
Effects 31, 43, 228
anti-anxiety 43
antidepressive 228
direct 31
Effects of psychological interventions
196
Ego functions 197, 198
Emollients patient preference 105
Emotional distress 13, 60, 64, 66, 68,
72, 76, 110, 151
significant 72
Emotional expression 186, 214, 218
Emotions 10, 68, 75, 100, 135, 137,
138, 139, 155, 158, 186, 188, 189,
200, 203, 210, 214, 215, 217, 218
Endorphins 5, 7
Enkephalins 5
Epidemiologic studies depression scale
76
Epinephrine 5, 7, 8
Epiphenomenon 40, 41
Erectile dysfunction 37, 38, 39, 144
Escitalopram 43, 150
Exacerbate 62, 63, 65, 80, 100, 155
Exacerbations 25, 26, 27, 150
stress-induced 27
Excoriation disorder 60, 71
Excoriations, psychogenic 13
Extrapyramidal side effect 126, 127,
128, 129

F

Factors 6, 25, 27, 33, 36, 37, 38, 63, 64,
65, 104, 106, 113, 153, 173, 174,
175, 186, 189, 193, 196, 211, 212
behavioral 174
external stress 36
nerve growth 6, 27
psychopathologic 211
skin-related 175
stress-related 175
unconscious 186, 189, 212
Fibroblasts 7
First-generation anti-psychotics 128
Fluoxetine 43, 106, 109
Formications 123, 128

G

Gastrin-releasing peptide (GRP) 5, 7
Generalized anxiety 33
General practitioner (GP) 94, 135, 136,
155
Genital psoriasis involvement 39
Guide treatment decisions 135

H

Hamilton anxiety rating scale 227
Health related quality of life (HRQoL)
62, 104
Hospital and anxiety depression score
154
Hospital anxiety and depression scale
(HADS) 71, 76, 146, 154, 158,
227
HPA axis 11, 27

- Humoral level
 Hyperprolactinemia 129, 130
 Hyper-sensitive reaction 207
 Hypnosis 42, 136, 151
 Hypnosis and biofeedback 42
 Hypothalamic-pituitary-adrenal (HPA) axis 11, 26
- I**
- Immune systems 8, 27, 40, 42, 171, 207
 Infections, secondary skin 123
 Inflammation, modulate skin 6
 Inform treatment goals 135
 Initiating treatment 126
 Insight psychotherapy 193
 Internalisation 138, 139
 International psoriasis foundation 40
 International psychoanalytical association (IPA) 189
 Interpersonal relationships 32, 35, 37, 63, 170
 Interventions 78, 175, 176, 178, 180
 intensive psychodermatology 78
 multimodal 175, 176, 178
 potent dermatologic 78
 psychopharmacological 180
 stress-management 175
 Isotretinoin 78
 Issues, negative psychological 63
 Itching cognitions questionnaire (ICQ) 174
- K**
- Keratinocytes 4, 6, 7, 8, 9, 10, 40, 214
 proliferation 8, 40
- L**
- Langerhans cells 4, 6, 7, 8, 27
 Level of psychological/psychiatric 186, 217
 Lichenified skin 10
 Life impact of psoriasis in clinic 153
 Lymphocytes 6, 7, 9, 201
- M**
- Magdalena 187
 Mediators 11, 12, 35, 36, 37
 common inflammatory 35, 36, 37
 Medical treatments of skin conditions 169
 Medications 25, 41, 43, 78, 88, 90, 95, 118, 124, 126, 127, 128, 129, 137, 150, 194, 196, 197, 225
 anti-anxiety 43
 atypical antipsychotic 127
 effective psychodermatologic 124
 psychiatric 194, 225
 psychotropic 78, 126, 150
 second-generation anti-psychotic 118
 Melanocytes 4, 6, 7, 10, 206

Melanocyte-stimulating hormone (MSH) 5, 7
 Mental disorders 13, 33, 91, 122, 198
 Mental health 30, 31, 62, 204
 Merkel cells 4, 6, 7
 Mild anxiety 33
 Mild-moderate depression 43
 Mild pruritus 29, 30, 34, 36
 Mirtazipine 106, 109
 Models, biopsychosocial 60, 63
 Monoclonal antibody 34, 37, 39, 42, 43
 Morgellons disease 120
 Multidisciplinary group treatment 177, 178
 short-term 178
 Multifactorial disorder 60, 61
 Multimodal treatments 167, 174
 Muscle cells 7, 9

N

Negative psychological effects 63
 Negative thoughts 80
 Nerve fibers 3, 4, 8, 9, 10
 Nerve growth factor (NGF) 6, 9, 27
 Nervous system 3, 7, 9, 10, 11, 26, 27
 sympathetic 26, 27
 Neurokinins 5
 A (NKA) 5
 B (NKB) 5
 Neuromediators 5, 6, 7, 8, 9, 10, 11
 Neuronal enolase 6, 7
 Neuropeptides 5, 6, 27, 201
 Neurotensin 5, 11
 Neurotic organizations 196, 199

Neurotransmitters 3, 5, 6, 8, 9, 10, 11, 12, 27
 ancient skin 5
 Neurotrophins 9, 27
 Nongenital skin sites 205
 Nonpharmacologic treatments 193
 Non-stress responders 26
 Norepinephrine 5, 7, 28

O

Obsessive compulsive disorder 88, 91, 100, 102, 108, 122
 Obsessive-compulsive disorder (OCD) 60, 69, 71, 91, 92, 93, 102, 103, 106, 108, 115, 122
 Oral antibiotics 78, 108
 Organizations 199, 228
 comprehensive structural 199
 legal authorities/patients 228

P

Palmoplantar psoriasis 30
 Parasitosis 71, 118, 119, 122
 Paroxetine 43
 PASI scores 146, 150, 151, 152, 154
 PASI scoring system 154
 Pathological skin 101
 Patient centred consultation 156
 Patient-centred consultation styles 158
 Patient health questionnaire 76
 Patient's illness perceptions 31
 Patient's motivation 211
 Patients relapse 129

- Patient's symptoms 125
 Peptide histidine isoleucine (PHI) 5
 Peter's psoriasis 187
 Phantasies 192, 205
 Phototherapy 42, 105, 146, 150, 151, 168
 Phototherapy treatment 148
 Physical component summary (PCS) 73
 Physical conditions, chronic 172
 Pilosebaceous units 60, 61
 Population, non-psoriasis 39
 Post traumatic stress disorder 108
 Prognosis 81, 106, 109, 115
 Prolactin 5, 127
 Pro-opiomelanocortin 7, 11
 Protein gene product (PGP) 6, 7
 Psoriasis 25, 26, 29, 32, 34, 36, 38, 39, 42, 136, 145, 147, 148, 150, 158
 childhood 145
 developing 39
 drive 147
 early-onset 29, 36, 39
 exacerbate 148
 exacerbated 150
 exacerbates 26
 genital 38
 gentleman's 136
 improving 42
 late-onset 36
 long standing 29
 managing 158
 moderate 38
 moderate/severe 150
 personality trait 25
 pustular 30, 39
 sexual dysfunction in 32, 39
 to-severe 34
 Psoriasis alexithymia 138
 Psoriasis and eczema 168, 177
 Psoriasis area severity index (PASI) 26, 136, 140, 150
 Psoriasis centre 153, 212
 specialist 153
 Psoriasis clearance 150, 152
 Psoriasis complain 32
 Psoriasis disability index 29
 Psoriasis index of quality of life 29
 Psoriasis lesions 9, 38
 Psoriasis life stress inventory 29
 Psoriasis patients 9, 28, 29, 30, 33, 34, 35, 41, 42, 43, 187, 188, 205
 Psoriasis plaques 152, 211
 Psoriasis quality of life 29
 Psoriasis report feeling 139
 Psoriasis severity 144, 146, 151, 152
 Psoriasis-stress relationship 43
 Psoriasis- stress relationship 26
 Psoriasis symptoms 9
 Psoriasis therapy 42
 Psoriatic 28, 37
 Psoriatic arthritis 30, 33, 36, 38, 143
 Psoriatic arthritis patients 34
 Psoriatic lesions 26, 27, 28, 30, 32
 Psoriatic plaques in high stress group 27
 Psoriatic skin 10, 28
 Psychiatric assessment 104
 Psychiatric background 37
 Psychiatric comorbidities 43, 74
 Psychiatric conditions 88, 103, 198
 Psychiatric diagnoses 108, 122, 127, 197, 200

- comorbid 122, 127
- Psychiatric diseases 41, 122, 225
 - leading primary 225
 - possible comorbid 122
- Psychiatric disorders 9, 69, 71, 107,
 - 113, 122, 193, 194, 198, 223, 224, 225
 - primary 198, 225
 - secondary 71
- Psychiatric etiology 118, 119
- Psychiatric evaluation 104
- Psychiatric Interventions 106, 108, 196, 224
- Psychiatric morbidity 41, 224
- Psychiatric nature 115, 170
- Psychiatric problems 167, 174, 178, 179
- Psychiatric/psychological problems 115
- Psychiatric/Psychosocial Interventions 115
- Psychiatric referrals 118, 119, 225
- Psychiatric symptoms 107, 197
- Psychic development 193
- Psychic predicament 193
- Psychic skin 197
- Psychic structures 204
- Psychoanalysis 186, 187, 188, 189, 190, 196, 198, 211, 215, 218
 - orthodox 190
 - post-Freudian 190
 - skin in 187
- Psychoanalysis functions 196
- Psychoanalysis stresses 192
- Psychoanalyst 186, 187, 188, 191, 194, 196, 197, 199, 212, 213, 216
 - trained 196
- Psychoanalytic 200
- Psychoanalytical conception 186, 191, 217
- Psychoanalytical theory 202
- Psychoanalytical treatments 195
- Psychoanalytic contributions 193
- Psychoanalytic evaluation 186, 217
- Psychoanalytic perspective 217
- Psychoanalytic schools 188
- Psychoanalytic statements 190
- Psychoanalytic terms 211
- Psychoanalytic theory 190
- Psychoanalytic treatment 189, 196
 - intensive 189
- Psychocutaneous disorders 13, 224
- Psychodermatological approach 178, 180
 - multidisciplinary 178
- Psycho dermatological conditions patients 104
- Psychodermatological disorders 186, 217, 223, 225
 - common 225
 - diagnosing 223
 - primary 225
- Psychodermatologic literature 128
- Psychodermatologic therapies 125
- Psychodermatologist 198, 200, 216
- Psychodermatology care 226
- Psychodermatology clinics, regional 225
- Psychogenic dysesthesia 13
- Psychogenic/Neurotic excoriation 101
- Psychogenic pruritus 13
- Psychogenic skin sensation 13
- Psychological approaches 43, 115

- Psychological assessment 60, 173
- Psychological burden, significant 66
- Psychological consequences 68, 211
- Psychological defences 191
- Psychological disorders 13, 62
- Psychological distress benefit 168
- Psychological factors 10, 13, 36, 66, 136, 137, 168, 224
- Psychological factors in psoriasis 37
- Psychological healing 213
- Psychological impairment 37
- Psychological intervention 60
- Psychological interventions 78, 149, 150, 171, 176, 179
 - web-based 42, 152
- Psychological interviews 196
- Psychological problems 63, 66, 80, 139, 144, 188, 191
- Psychological processes 63
- Psychological terms 206
- Psychological testing 75
- Psychological treatments of skin diseases 180
- Psychological variables and stressful life events 193
- Psychological well-being 31, 141, 167, 168, 172
 - decreased 167, 168
- Psychologic cause 120
- Psychologic interventions 196
- Psychologische behandelning 180
- Psychometric tools 74
- Psychopathology 63, 75, 178
- Psycho-pharmacological treatments 70
- Psychosis 127, 197, 210
- Psychosocial 74, 77, 113, 174, 196, 211
- Psychosocial burden 43, 67
- Psychosocial consequences 60, 62, 179, 193
 - adverse 60, 62
 - potential 179
- Psychosocial counselor 173
- Psychosocial development 63, 170
- Psychosocial element 110
- Psychosocial factors 60, 167, 168, 171
- Psychosocial impact 62, 77
 - marked 62
- Psychosocial impairment 77
- Psychosocial implications 62
- Psychosocial morbidities 104
- Psychosocial outcome measures 73
- Psychosocial problems 63, 173
 - skin-related 167, 174, 175
 - target 175
- Psychosocial situation 213
- Psychosocial stressors 102, 106, 112, 175, 199
- Psychosocial symptoms 173
- Psychosocial well-being 30, 168
 - decreased 168
- Psychosomatic chain 211
- Psycho-somatic dissociation 195
- Psychosomatic problem 190
- Psycho therapist 195
- Psychotherapy 9, 42, 43, 113, 186, 190, 193, 195, 196, 207, 211, 212, 213, 214, 216, 217, 218, 228

- dynamic 228
 - psychoanalytic 190, 218
 - psychodynamic 213
 - Psychotherapy aims 217
 - Psychotherapy outstands 211
 - Psychotherapy sessions 152, 195
 - individual 152
 - Psychotherapy treatment 194
 - Psychotic 197
 - Psychotic disorders 40, 126, 128
 - Psychotic elaboration 210
 - Psychotic levels 200
 - Psychotic organizations 196, 199, 210
 - Psychotic regression 203
- Q**
- QoL instruments 29
 - QT prolongation 127, 128
 - Quality of life instruments for psoriasis 29
 - Quetiapine 127, 128, 129
- R**
- Relaxation exercises 167, 174, 175, 177
 - Relaxation therapy 42, 176
 - Relaxation training 81, 152
 - Risperidone 115, 127, 128, 129, 228
 - Rosenberg self-esteem scale (RSES) 77
- S**
- Salford psoriasis
 - Schizophrenia 88, 122, 126, 129
 - Screening for BDD in acne patients 70
 - Screening Question 94
 - Second generation antipsychotics (SGAs) 128, 129, 130
 - Selected Antipsychotic Medications 127
 - Selective serotonin reuptake inhibitors (SSRI) 43, 88, 95, 96, 106, 109, 115, 127, 128
 - Serotonine reuptake inhibitors 88
 - Serotonin pathways 115
 - Service 153, 155
 - dedicated psychology 153
 - local psychology 155
 - psychology-based
 - psycho-dermatology 155
 - Sexual dysfunction 25, 30, 36, 37, 38, 39, 129
 - Short-term stress management training 175
 - Side effects 128, 129, 212
 - patients experience extrapyramidal 128
 - Simplified psoriasis index (SPI) 140, 154
 - Skills 32, 67, 177
 - psychological 32
 - social 67, 177, 197
 - Skin 10, 28, 72, 111, 158, 197
 - defensive 197
 - facial 89
 - involved 28
 - normal 111
 - red 177
 - second 192, 197

- sensitive 10
- standard 158
- unblemished 72
- wounded 170
- Skin aging 13
- Skin alcohol 40
- Skin and mental disorders 13
- Skin barrier function 104
- Skin biopsies 104
- Skin blemishes 72
- Skin care routines 177
- Skin cells 6, 11, 201
- Skin changes 118, 123, 124
 - secondary 123
- Skin complaints 170, 177
 - improving 177
- Skin condition(s) 63, 65, 66, 67, 72, 74, 77, 80, 81, 107, 113, 144, 145, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 179, 192, 197, 223, 224
 - disfiguring 63, 145
 - impact of 168, 224
 - inflicted 107
 - prevalent chronic 168
 - visibility of 169, 172
- Skin conditions experience 167, 168
- Skin conditions report 170
 - chronic 169
- Skin container function 197
 - failed 192
- Skin cultures 113
- Skin damage 169, 172, 173
- Skin debris 121
- Skin deterioration 177
- Skindex-61 29
- Skin disease 3, 72, 75, 81, 100, 103, 108, 110, 111, 113, 115, 169, 171, 173, 176, 177, 180, 187, 191, 193, 194, 195, 196, 217, 224, 225
 - artefactual 110, 225, 227
 - chronic 62, 173
 - chronic inflammatory 171
 - depression-worsened inflammatory 227
 - factitious 111
 - granulomatous 113
 - multifactorial 198
 - real 192
 - visible 61, 64
- Skin disorders 8, 9, 10, 11, 13, 190, 193, 194, 195, 197, 225
 - associated 225
 - common 224
 - common primary 113
 - factitious 110
 - inflammatory 3
 - primary 100
- Skin exposure time 157
- Skin flakes 121
- Skin flare mediating fibres 12
- Skin functions 3, 191
- Skin handling 223
- Skin involvement 33
- Skin issues 105
- Skin lesions 13, 110, 113, 178, 203, 206, 215, 229
 - inflicted 110
 - psychosomatic 206
 - self-inflicted 178
- Skin modifications 192
- Skin neuromediators 6
- Skin neurons 4

- Skin problems, pre-existing 102
 - Skin production 11
 - Skin-related illness cognitions 174
 - Skin-related problems 177, 179
 - Skin rubbing 71
 - Skin swabs for microscopy and culture 104
 - Skin therapy 114
 - Sleep problems 169, 170
 - Smoking and alcohol 146, 147
 - Smoking exacerbates psoriasis 39
 - Social anxiety disorder 69
 - Social disruption 144
 - Social life 33, 76, 135, 136, 137, 154
 - Social problems 168, 170, 179
 - Social situations provoke anxiety 69
 - Social support 63, 67, 79, 174
 - Social worker 223, 226, 227, 228
 - Somatic condition, real 186, 217
 - Somatic conditions 171, 187
 - Somatic disease 204, 205, 210, 229
 - Somatic trait anxiety 29
 - Specimens 121
 - SPS-Skin Picking Scale 104
 - States, dissociative 110
 - Stigmatization, perceived 171, 175, 176
 - Stigmatization patients 32
 - Stress 11, 25, 26, 30, 42, 63, 100, 171, 176
 - disease-related 176
 - psoriasis-related 42
 - psychological 11, 30, 63
 - psychosocial 25, 26, 100
 - skin conditions cause 171
 - Stress and psoriasis 148
 - Stressful situations 106, 148, 171
 - Stress management 152, 168, 176
 - Stress-management 176
 - Stress management trainings 171
 - Stress-psoriasis association 27
 - Stress-responders, non-depressed 43
 - Suicide ideation 60, 69
 - Suicide risk contact liaison psychiatrist 155
 - Support group, psychotherapeutic 150
 - Sympathetic nervous system (SNS) 26, 27
 - Syndromes, anxious-depressive 193
 - Systems, neuro-immuno-cutaneous 3, 8
- T**
- Team 100, 175, 200, 223, 227
 - interdisciplinary 200, 223, 227
 - multidisciplinary 100, 175
 - Techniques 79, 81, 136, 151, 176, 190, 202, 215
 - psychoanalytic 215
 - psycho-drama 202
 - Test 88, 93, 204, 205
 - affective distances 204, 205
 - neuropsychological 93
 - psychological 75, 88
 - Therapy 80, 167, 168, 174, 176, 178, 188, 198
 - cognitive behavioral 176
 - cognitive-behavioral 167, 168, 174, 178
 - cognitive-behavioural 80, 188
 - psychoanalytic 198
 - Time-intensive treatments 171
 - Trained health psychologist 80
 - Trauma 25, 102, 104

- peripheral skin 102
- psychological 104
- Treatment adherence 74, 82
 - improving 74
- Treatment efficacy 141
- Treatment failure 96
- Treatment goals 157
 - patient-derived 135
- Treatment modalities 108, 150
 - common 108
- Treatment motivation 96
- Treatment of skin picking disorder 105
- Treatment of stress in psoriasis 41
- Treatment prescriptions 172
- Treatment regimen 81
- Treatment repertoire 95
- Treatment response 96, 147
- Treatments of itch-scratching problems 177

- Trichotillomania 13, 170, 178, 202, 226
- Trusting patient-clinician relationship 155
- Tumour necrosis factor (TNF) 8, 147

U

- Ulceration 102, 103, 111
- Unimodal treatments 175

V

- Vasoactive intestinal peptide (VIP) 5, 7, 8, 10
- Vicious cycle 26, 80, 81, 171, 172
- Vulvar psoriasis 30

W

- WPAI outcomes 146

