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Approaching Treatment for Psychodermatology Patricia Karen Paucar Lescano Received: 7 December 2018 Accepted: 1 January 2019 Published: 15 January 2019

5 Abstract

- ⁶ The interaction between the mind and skin diseases has been the focus of study of many
- ⁷ researchers around the world; Psychodermatology is the result of the fusion of medical
- ⁸ specialties: psychology, psychiatry and dermatology. Dermatologists are aware of the potential
- ⁹ for significant improvement of dermatological pathology when addressing the
- ¹⁰ psychological-psychiatric dimension and vice versa, the bidirectional relationship has already
- ¹¹ been described, we know that it is necessary to break this cycle, but we still have to define the
- ¹² treatment, for which we must know the different therapies
- 13

Index terms— psychosomatic medicine, medicine traditional, complementary therapies, sychopharmacology,
 psychotropic drugs

16 1 Introduction

sychodermatology is a sub-specialty of dermatology, where patients present: 1) primary psychiatric condition, 17 18 which they go to dermatologists; 2) primary dermatological disease with psychological or psychiatric comorbidi-19 ties; 3) dermatoses that influence the psychological state, maintaining or aggravating it 1. The relationship of mental pathologies and dermatological diseases: it is bidirectional, being necessary to break this cycle to 20 treat patients 2. Because it involves the skin, the nervous system and the mind, psychodermatology needs 21 the collaboration and integration of the dermatologist, with the psychologist and the psychiatrist; otherwise, 22 psychodermatosis will not be treated in its complexity 1. Dermatologists should be able to know several 23 nonpharmacological treatments, initiate basic pharmacotherapy and recognize the correct time to refer patients 24 to the psychiatrist 3. They also need to approach the patient, which is obtained when considering dermatosis 25 from the perspective of those who experience the disease 1, so the dermatologist, in the consultation must be 26 empathic, meet the patient's expectations and be optimistic, aspects of the encounter clinical conditions that 27 can foster a positive therapeutic relationship 2. For treatment, you should always start using stress reduction 28 techniques, the main causative agent of diseases 1. 29

30 The main objective is to know the different therapies we have to treat psychocutaneous pathologies.

31 **2** II.

³² 3 Development of the Topic

Most diseases are multifactorial: Biological, psychological, emotional, social and spiritual factors, add to previous situations, from conception, pregnancy, birth to the presentation of the disease, whose effects accumulate in the body: these circumstances exert a unique role for each person, which will trigger a disease, whose presentation will be particular for each patient 1.

37 Established as a subspecialty of dermatology, Psychodermatology studies the bidirectional relationship, 38 in which psycho-psychiatric disorders cause skin diseases and skin diseases cause psychiatric disorders 2 In dermatology, what affects the skin is visible to both people and the same patient, damaging the 39 . physical appearance, compromising the patient's image and achieving self-esteem, producing unpleasant physical 40 sensations that unbalance the person, creating discomfort, irritation and impatience; sometimes triggered, various 41 mental states, such as depression, anxiety and distortion of body image 1. In this scenario, we emphasize the 42 idea that a dermatologist should be prepared to diagnose, provide appropriate psychological support and treat 43 his patients 3. A good doctor-patient relationship is the key to success 4. 44

45 **4** III.

$_{46}$ 5 Stress

The skin is particularly affected by stress and it is important to take into account the role it plays in the generation, 47 maintenance or aggravation of dermatosis 1. Stress is defined as the set of physiological responses and adaptations 48 that occur in the body every time a threat is perceived, real or imaginary, affecting physical, mental and emotional 49 balance 5. Stressful thoughts are varied, because they depend on the interpretation that each person gives to what 50 happens in their mind; many can be imagined or happening, so fantasy and reality produce the same biochemical 51 states and emotions in the body; thoughts, therefore, affect the skin by chemical mediators brought to the skin 1. 52 The hypothalamic pituitary axis (HPA) responds to psychological stress, with increased stress hormones (releasing 53 corticotropin hormone, adrenocorticotropin, cortisol and prolactin); activating the sympathetic nervous system, 54 which raises the levels of catecholamines and increases neuropeptides and neuromediators, such as, substance P 55 and calcitonin gene structure peptide (CGRP); mastocytic skin cells are an important target of stress hormones 56 and mediators and their activation leads to immune dysregulation, neurogenic inflammation, proinflammatory 57 response and vasodilation; producing various skin diseases, inflammatory, autoimmune and allergic 4, in addition 58 to aging 6,7. 59 IV. 60

61 6 Psychodermatosis

Psychodermatoses are changes in the skin that: 1. Are caused by psychiatric problems; 2. Cause psychiatric
or psychological disorders due to their clinical manifestation; 3. They influence the psychological state and are
maintained or aggravated by this 1.

They are divided into four types: The manifestations of group 1 are the mirror of what happens in the patient's mind, it is not possible to effectively attend to patients, without acting on mental disorders 1.

In the dermatoses of the second group, the mind is secondarily affected by skin diseases; they are stigmatizing, 67 anti-aesthetic, diseases that cause intense or prolonged symptoms of stress, irritability, fear, shame, catastrophic 68 prediction, anxiety, depression, anger, self rejection, isolation, discouragement and fatigue 1. In this group, 69 psoriasis, vitiligo, atopic dermatitis, alopecia areata and hydradenitis are the most common 2; other dermatoses 70 with less intense effects are acne, dyshidrosis, hyperhidrosis of the hands, feet and armpits, leprosy, herpes 71 simplex, hypertrichosis, lichen planus, perioral dermatitis, rosacea, seborrheic dermatitis, scleroderma, lupus 72 erythematosus, pemphigus, leg ulcers and dermatoses with a devastating effect on the psyche are ichthyosis, 73 74 epidermolysis, hemangiomas and any other dermatosis interpreted as disastrous or harmful for a particular 75 patient 1.

In the third group, dermatoses that affect the psyche as they affect the clinical picture, cause its maintenance or aggravation and facilitation of the cure or resistance to treatment; many are part of the second group to which allergies and serious diseases such as neoplasms are added 1, some of them when treating psychological imbalance

79 or psychiatric illness and remitting them, are potentially cured, because the origin of the disease is being treated.

80 7 V.

81 8 Interdisciplinary Care

82 Given the permanent interaction of the mind and the skin, it is necessary that the patient be treated as a unit consisting of several levels, which correspond to cutaneous, emotional and mental aspects; it is necessary to use 83 the resources available by Dermatology, as well as those that are in the domain of other areas that participate 84 in these diseases, how, psychology and psychiatry 2. First, it is necessary for the dermatologist to acquire skills 85 that go beyond the diagnosis and management of skin diseases; specialist who understands that the patient's 86 emotional complaints are part of the clinical picture and has the ability to explore them and provide some type 87 of support to the affected patients may be more effective in their treatment 1. In many cases, dermatoses 88 are followed by an inability to control emotions that require a systematic and specialized correction for which 89 the dermatologist would have no preparation or time; thus the dermatologist can obtain the basic preparation 90 to explore and attend to the emotional states of the patient, giving him/her, through amical language and 91 92 appropriate questions, conditions to see the real dimension of the problem and provide management options 1 93 Often, a welcoming attitude of the doctor is the first step, to treat and facilitate the cure of the patient 2. 94 However, a complete systematic work requires the participation of a psychologist, preferably someone interested 95 in dermatological problems 1. And in the psychodermatoses of the first group, which involve psychopathology, the participation of a psychiatrist is essential for the precise diagnosis of the underlying disorder and follow-up 96 with specific medications, which require depth of knowledge, daily experience in the control of the underlying 97 pathology and possible undesirable adverse events; despite this, it is necessary for the dermatologist to have basic 98 knowledge of psychopharmacology and psychoactive drug management to attend to simpler cases 8 or those in 99 which the patient takes a while to accept that he or she needs help from the psychiatrist. 100

¹⁰¹ 9 VI. Integrated Therapeutic Resources

Considering the participation of emotions and the mind, it is necessary to integrate all the resources that these 102 areas may involve 1. Basically, the dermatologist will pay attention to the cutaneous condition, seeking to 103 correct the dermal pathology; however, it is important to master the mind-body antistress techniques; they are 104 natural attitudes that, surprisingly, are not taught and therefore are not followed by patients or doctors and can 105 keep stress at a non-harmful level at no cost; these techniques can be applied during the consultation and the 106 doctor must instruct the patients to practice them routinely to maintain their physical and mental balance, the 107 fundamental ones are four: upright posture, change of respiratory pattern, muscle relaxation and meditation; All 108 have proven efficacy to reduce stress and promote body balance 1. Simple conscious breathing is changed from 109 the thoracic to the abdominal pattern, producing important changes in the organism in the sense of physiological 110 and psychological balance 9. Remembering or teaching patients to say what we think and feel, properly, helps 111 us to let off steam and relax; The concept of Alexithymia, is characterized by the inability to identify and 112 express their emotions, several studies have reported a high incidence of alexithymia in patients with alopecia 113 areata (58%) 10, psoriasis (35%) 11, chronic urticaria (50%) 12 and vitiligo (35.5%) 13. It would also be 114 necessary to perform an activity that the patient enjoys, which will contribute to his muscle relaxation; how 115 to dance, paint, exercise, travel, play a musical organ, learn a language, etc: an activity that brings a smile 116 to the patient; we must consider that each person is unique, so the activity you choose will also be special 117 for each patient. Transcendental meditation is a meditation technique, associated with yoga, tantra, Tibetan 118 Buddhism and Zen Buddhism; produces neurochemical, neurophysiological and cognitive behavioral effects in 119 its practitioners, significant and positive; Among the main effects is the decrease in anxiety and stress (due to 120 the decrease in cortisol and norepinephrine levels), increasing the feeling of pleasure and well-being (due to an 121 increase in the synthesis and release of dopamine and serotonin) 14. 122

Intervention with psychoactive drugs is used in cases with marked mental changes such as personality disorder, bipolar disorder, narcissistic personality disorder, depressive disorders, anxiety disorders, posttraumatic stress disorder, schizophrenia, obsessive compulsive disorder, should be performed by a psychiatrist in consultation with Dermatology because it involves another area of Medicine 15.

127 Almost all skin diseases are capable, to a lesser or greater degree, of emotionally affecting patients; Today 128 there is the concept that in certain diseases, the involvement may be minimal and we should refer the patient to a psychologist, as if the mind were the exclusive cause of the disease, which, once treated, will lead to a 129 cure; This aspect deserves careful consideration by the specialist because the patient often treats the problem 130 perfectly well without emotionally affecting it; but for some people, the degree of emotional deterioration is 131 so complex that it becomes imperative to refer the patient to psychotherapy 1. So in some cases, a prudent 132 period must be expected, for the patient to use their own stress management techniques and not to balance, 133 refer to the psychologist or psychiatrist, as appropriate. With regard to psychotherapies, there are several types 134 and each person adapts to one, the most commonly used is cognitive behavioral therapy, which is recognized 135 as effective in many cases 16. Other techniques include transactional analysis, bioenergetic analysis, gestalt 136 therapy, psychodrama and reprogramming techniques such as neurolinguistic programming, timeline therapy, 137 EMDR (desensitization and reprocessing of eye movement) and energy techniques such as TFT (Field of thought 138 therapy) and EFT (Emotional Freedom Techniques); although the mode of action of some of them is not perfectly 139 clear, it is necessary to maintain the integrative concept; There are reports of positive effects with these techniques 140 in individual cases or in large numbers of people 1. Other resources, well known and used, are biofeedback, 141 guided imagery, visualization and support groups 17,18. Hypnosis is a technique with proven effects on the brain 142 and capable of producing unexpected results, in addition to being usable in a large number of dermatoses 19. 143 such as trichotillomania, where hypnotic suggestions are used that cause pain when touching the scalp or tearing 144 the hair 20. There is also self hypnosis and self massage, which are techniques of self application, as well as yoga 145 and tai chi chuan, originally from India and China, the first being a philosophy of life, which integrates mind and 146 body, and the second originated in the martial arts, producing energizing effects on the body 1. 147

It is important to remember that, rarely, dermatologists relate the ability to react the skin with touch and its influence on the nervous system and immune system; touching the skin and stimulating it in the form of massages, it has the power to facilitate the recovery of burns 21, reduce levels of stress and anxiety hormones, increase the delta waves that indicate relaxation and decrease of the alpha and beta waves in the electroencephalogram, reducing the cortisol and raising the cytotoxic capacity, increasing the number of natural killer cells; This resource is available to specialists and can be of great value in the treatment of psychodermatosis, using the assistance of massage therapists 1.

155 **10 VII.**

156 11 Discussion

Multidisciplinary services have been developed within specialties and subspecialties such as dermatology, which can be operated by several specialists (group approaches) or by a single specialist with a multidisciplinary approach 22 . Intervention levels may vary from providing tranquility and effective communication (either in primary care or in medical specialties) to specific psychotherapies and psychopharmacological treatments 23 . Psychotherapeutic interventions, we have: psychoeducational interventions, stress management procedures,

cognitive behavioral therapy, brief dynamic therapy, family therapy and group interventions; they have been 162 applied to patients in controlled research 24,25. The prescription of psychotropic drugs is applied, individually, 163 to a careful balance between potential benefits and adverse effects 26. A macroanalysis 22 recommends it 164 in specific clinical situations: (1) presence of psychological disorders (for example, demoralization, irritable 165 mood) or psychiatric illness (for example, major depression, panic disorder); (2) refractoriness of lifestyle 166 modifications guided by primary care or other nonpsychiatrists; (3) the presence of abnormal disease behavior 167 (from hypochondria to disease denial) that interferes with the treatment or that leads to frequent use of medical 168 care, and (4) impaired quality of life and functioning, not all justified by the medical condition. 169

A review on psychiatric comorbidity in patients with dermatological disease, indicates that most dermatologists are not mental health professionals with extensive training in psychotherapy and psychopharmacology, but have mental abilities to acquire basic principles of these fields and apply them in the improvement of their patients; dermatologists should implement screening tools, diagnose psychiatric comorbidities and refer to psychiatry is an excellent option for management, if the patient agrees, but if you do not want to go, start the treatment falls into the hands of the dermatologist; i describe psychiatric comorbidities and some common psychotropic agents 27.

177 **12 a)** Anxiety

Either a secondary psychiatric disorder in response to severe psoriasis, an exacerbation factor in cutaneous 178 pathology such as eczema, or primary psychiatric disorder such as neurotic excoriations; a class of anxiolytics are 179 benzodiazepines, they have a rapid onset of action and an effect that goes from short to long-acting; quick start, 180 181 gratification is immediate and this kind of medication can be very addictive, particularly if used for extended 182 periods of time; risks: sedation and respiratory depression, and withdrawal seizures are dangerous with a lifethreatening risk of abrupt discontinuation after long-term use; alprazolam is one of the most used benzodiazepines 183 184 and confers a unique antidepressant effect, unlike other benzodiazepines, therefore, for an individual with a mixture of depressive symptoms and anxiety, alprazolam; It may be a good choice; starting with a low dose 185 is always a good option and climbing slowly until you reach the minimum effective dose is important to avoid 186 excessive sedation and limit the risks; the typical starting dose is 0.25 mg three times a day (TID), with the 187 188 ability to increase the dose every 3 to 4 days to a maximum of 4 mg/day and it is recommended to start even lower, at 0.125 mg (half of a 0.25 mg tablet) TID and holder up to a maximum of 2 mg/day; An additional 189 recommendation is to use benzodiazepine for 2-3 weeks and to process a psychiatric referral, for providers who are 190 not accustomed to administering this medication in the long term, note that alprazolam is particularly addictive 191 192 due to its rapid onset and short duration of action 27. A longacting benzodiazepine, such as clonazepam, is suggested as a reasonable alternative 28. Although clonazepam does not confer the same antidepressant effect, it 193 194 is less addictive and may be more suitable for patients with strict anxiety conditions, without signs of depression, this medication is started with 0.25 mg twice daily (BID) and increases every 2 days up to 0.5 mg TID, with a 195 maximum dose of 4 mg/day, although as with alprazolam, a maximum of 2 mg/day may be more practical for 196 dermatologist prescribers 27. Once again, benzodiazepines are the most suitable for short-term use, and as such, 197 they are commonly used to control anxiety while safer, long-term but slower-acting treatments (as discussed later 198 in the text) are taking time to produce the physiological changes necessary for therapeutic benefit 28 199

200 Another type of anxiolytic is buspirone, which is classified as a non-benzodiazepine anxiolytic, which means 201 that it does not carry the same risks of addiction, withdrawal and sedation: this medication is typically prescribed to treat generalized anxiety disorder and its effects may appear at less 2 weeks after taking it; initial dose of 202 buspirone is 5 mg TID or 7.5 mg BID; due to its linear pharmacokinetics and short half-life, it is possible 203 to increase the dose by 5 mg/day every 2-3 days to a goal of 20-30 mg/day, divided into two or three daily 204 doses; if, after several weeks, an adequate clinical improvement has not been obtained, it is possible to assess a 205 maximum dose of 60 mg/day; side effect profile of buspirone is relatively mild, with common symptoms such as 206 gastrointestinal (GI) disorders (nausea, vomiting and diarrhea), drowsiness, fatigue, lightheadedness/dizziness, 207 and headache 27. 208

As another alternative, selective serotonin reuptake inhibitors (SSRIs), escitalopram and paroxetine are also 209 approved for the treatment of generalized anxiety disorder 29. SSRIs are first-line antidepressant medications 210 211 that have been used safely for years, with common adverse effects that include GI disorders, sexual dysfunction 212 and drowsiness, and possible serious reactions such as serotonin syndrome, paradoxical increased suicidality 213 and inappropriate secretion syndrome of antidiuretic hormone (SIADH) 27. In comparison, escitalopram has 214 demonstrated superiority over paroxetine and has demonstrated longterm efficacy and safety in the treatment of generalized anxiety disorder [30][31][32]. Escitalopram can be started at 10 mg/day and increase after 1 week 215 to a maximum of 20 mg/day; both doses have demonstrated efficacy and good tolerability; as escitalopram is an 216 antidepressant, unlike benzodiazepines and buspirone, an additional potential risk is to trigger a manic episode 217 in a patient with bipolar disorder, it is important to ensure that there is no history of mania in patients before 218 starting escitalopram or any other antidepressant 27. 219

²²⁰ 13 b) Depression

For some people with depression, irritability and psychomotor skills, agitation can be a prominent feature, and 221 this can contribute to the development of primary psychiatric conditions such as neurotic excoriations, factitious 222 dermatitis and excoriated acne; doxepin is a tricyclic antidepressant drug (TCA) that has proven very useful 223 in the treatment of this type of patients, the reason why doxepine is unique among other antidepressants is 224 that it demonstrates potent antihistamine effects, reducing itching, antihistamine effects as well they can cause 225 drowsiness, so it is recommended to take it while sleeping; Doxepin can be started at 25 mg/day and increased 226 by 25 mg every 5-7 days until the ideal therapeutic dose is reached, typically between 100 and 300 mg/day; like 227 TCA, doxepin comes with all the classic side effects and risks that this type of medication entails, including 228 anticholinergic symptoms (dry mouth, urinary retention, blurred vision, tachycardia, etc.), cardiac conduction 229 problems and orthostatic hypotension; TCAs are potentially lethal in overdoses, so be sure to ask directly and 230 explicitly about suicidal thoughts or self-harm, any suspicion of suicide in a patient should cause caution when 231 prescribing, making sure to avoid providing an excessive amount of tablets beyond what is necessary until your 232 next appointment, closer follow-up (more frequent visits) may also be justified 27. Fortunately, it is possible 233 to verify the serum levels of doxepine, and this can be useful not only in the investigation of possible cases of 234 overdose, but also to confirm the patient's compliance with the treatment and determine if the therapeutic levels 235 have been reached 33. 236

For other variants of depression, SSRIs are typical first-line medications, due to their proven effectiveness, 237 better safety and tolerability compared to alternative antidepressants such as TCA (tricyclic antidepressants) 238 and monoamine oxidase inhibitors 27. Serotonin-noradrenaline reuptake inhibitors (SNRIs) are also a first-line 239 option, and some studies have shown SNRI, venlafaxine, is particularly effective in melancholic depression and 240 patients with significant psychomotor retardation 34. SSRIs fluoxetine and sertraline are considered "activation" 241 medications, they are also good for melancholic depression; sertraline demonstrates better effectiveness and better 242 tolerability 35,36. In fact, a large meta-analysis concluded that sertraline is the best option for initial treatment 243 in patients with moderate to severe depression, since it has the best balance of effectiveness, tolerability and 244 cost36. Sertraline can be started at 50 mg/day and increase every week by 25 mg/day to a maximum of 200 245 mg/day, if necessary, some psychiatrists start with an even lower dose (12.5 or 25 mg/day) and wait for see the 246 benefits at 100 mg/day, in most cases 27 . 247

SSRIs and SNRIs are widely prescribed and are generally safe options, which dermatologists can prescribe 27
 .

²⁵⁰ 14 c) Psychosis

251 Psychosis is the main psychopathology underlying psychodermatology, disorders such as delusions of parasitosis, 252 where patients maintain fixed and false ideas (delusion) that parasites reside within their skin; such delusional 253 conditions are part of a subset of psychosis, called monosymptomatic hypochondriacal psychosis (MHP), in which delusions are confined and much less penetrating and harmful than the psychotic symptoms of conditions such as 254 255 schizophrenia 37. When dealing with patients suffering from delusions, it is important to accept and not argue to establish a good relationship 27,38; willingness to examine the evidence, keep an open mind and the clinician, at 256 the same time, should avoid validating or reinforcing the patient's false beliefs 27. Before prescribing psychotropic 257 medications, it is imperative that the clinician determine if the patient's symptoms come from real organic 258 origins; a patient with suspected DI (delusional infestation), for example, may have an infestation with scabies 259 or lice (careful examination and skin scraping, are vital), or they may experience training (tingling sensation 260 in the skin) as a result of abuse of recreational drugs such as amphetamines, cocaine, alcohol or other illegal 261 262 substances27. Other causes include vitamin B12 deficiency, cerebrovascular disease, multiple sclerosis, Parkinson's disease, syphilis, hypothyroidism, diabetes, cancer and iatrogenic 39,40. Dopamine medications prescribed for 263 Parkinson's disease, including ropinirole and pyribedil, have been identified as causes of DI in several cases 41 264 Discarding these triggers is important, since only primary DI (caused by true delirium/psychosis) is treated 265 with antipsychotics, while secondary DI (which has an organic basis) is treated by addressing the underlying 266 problem 27. Discarding substance abuse may require more than simply asking the patient if they use drugs, 267 since substance abuse seems to be quite frequent in this patient population, and they do not always openly reveal 268 the habit 42. As result, routine urine drug tests may be recommended for new patients with ID, even if they 269 deny drug use 27. 270

Pimozide is a typical first-generation antipsychotic, it has demonstrated effectiveness in the treatment of MHP 271 272 in dermatological patients, particularly delusions of parasitosis 37,43. The initial dose is 1 mg/day and can be 273 increased by 1 mg every week, the maximum dose is 10 mg/day, but patients with MHP generally show a good 274 response at doses of 4 mg/day or less; extrapyramidal symptoms, such as dystonia and parkinsonism, are possible 275 and can be combated with benztropine mesylate, taking 1-2 mg BID or diphenhydramine by taking 25 mg 3-4 times a day; cardiac conduction abnormalities have also been detected, reporting electrocardiographic changes 276 such as T-wave abnormalities and prolongation of the QT interval, so an electrocardiogram is recommended 277 before starting to take pimozide and after treatment has begun; if there is prolongation of the QT interval, the 278 medication should not be started or should be discontinued 27 ; pharmacological interactions are also possible, 279 particularly with drugs that are metabolized by cytochrome P-450 isoenzyme 3A4 44. 280

Although pimozide has historically been the best option for ID, the development of second generation atypical 281 antipsychotics, new and safe (SGAs), cause less extrapyramidal and anticholinergic side effects 44,45, a recent 282 and thorough investigation into the effectiveness of SGA identified 63 published cases of DI in which SGAs were 283 used, demonstrating partial or total remission obtained in 75% of patients44. Olanzapine and risperidone were 284 285 the most used agents 27. Other atypical antipsychotics recommended for the treatment of ID include quetiapine, amisulpride and a third generation antipsychotic, aripiprazole 46,47. Dosage of these medications (risperidone 286 0.5-1 mg daily; olanzapine 5 mg daily; quetiapine 50 mg daily; amisulpride 50 mg daily; and aripiprazole 5 mg 287 daily) are low doses for DI than for more generalized psychotic conditions such as schizophrenia, and routine 288 laboratory monitoring is not usually necessary 27. Due to the risks of cardiotoxicity and pharmacological 289 interactions with pimozide, these agents have now replaced pimozide as a first-line treatment for DI 44 . It should 290 be noted that SGA clozapine was not included in this list, since this medication requires frequent monitoring 291 of blood count due to the risk of agranulocytosis 27. In addition, it is important to recognize that almost all 292 antipsychotic agents can cause weight gain and/or metabolic syndrome, presenting a greater risk with olanzapine 293 and clozapine, and little or nothing with amisulpride and aripiprazole 48. It has been determined that this 294 weight gain is mediated by an antagonistic effect on H1 histamine receptors (H1R), and the commonly prescribed 295 H1R agonist and anti-vertigo drug, betahistine, is able to safely and effectively mitigate weight gain associated 296 297 with antipsychotics [49][50][51]

298 Although it may be difficult to convince a patient to try an antipsychotic medication, present the medication 299 as capable of diminishing uncomfortable sensations (instead of explicitly stating that it will treat psychosis or improve the patient's skin), it is recommended; also explain to the patient the importance of treating their 300 301 condition from the outside in (with topical medications and creams, such as mupirocin and moisturizers) as well as from the inside out (with oral medications), a successful treatment requires both attack routes, to support the 302 patient compliance; It is useful to keep in mind that these medications take 6 weeks to start working and their 303 maximum effect is expected up to 6 months after starting, if the treatment is effective and the patient experiences 304 remission of ID, it is reasonable to try to start weaningm antipsychotic 3 months after obtaining remission, with 305 a plan to restart if a relapse occurs 27. The greatest risk of recurrence is within the first 3 to 4 months after 306 discontinuation of the antipsychotic, 25% of patients experience the return of symptoms requiring longer courses 307 of treatment or possibly long-term maintenance therapy 52. 308

Although the prescription of antipsychotics is not a typical activity for dermatologists, some have argued that patients with MHP differ dramatically from more affected individuals seen by psychiatrists; antipsychotic treatment can improve the patient, since they are "difficult" patients who continuously rotate in the offices without any sign of improvement despite extensive and repetitive advice, represent an opportunity for dermatologists, take care of the health of their patients and focus your efforts on the cause of the skin condition 27.

³¹⁴ 15 d) Obsessive compulsive

The last conditions to discuss are those based on obsessive behavior: compulsive, although referral for psychological counseling, such as cognitive behavioral therapy, exposure and response prevention or other behavior modification therapies, can be extremely effective and should be considered first-line, patients may be resistant to these options or may not respond, in which case psychopharmacological interventions are necessary [53][54][55] .

Clomipramine is a TCA that has demonstrated superiority in its class for the treatment of OCD and related conditions, such as trichotillomania and onychophagy; Clomipramine starts at 25 mg/day and can be increased to 250 mg/day if necessary; for children, the maximum dose is 3 mg/kg /day; side effects are similar to other eating disorders as previously discussed, with a little more seizure onset (seizure threshold decreases) and sexual dysfunction 27.

Fluoxetine is an SSRI alternative for OCD, which showed similar efficacy and has been successful in treating dermatological conditions such as habit-tic nail deformity; it is prescribed at 20 mg/day and can be increased up to 80 mg/day maximum if necessary, although 20-40 mg/day is typically effective; as with other SSRIs, the effects may not be noticed for a few weeks, and the maximum benefit may take 6 to 8 weeks; it should be noted that fluoxetine is approved by the FDA for depression, but not OCD (obsessive compulsive disorder), so its use in this condition would be off-label 27.

A more exclusive treatment option for this class of conditions, it's N-acetylcysteine (NAC), which has shown promise in the treatment of trichotillomania [56][57][58][59].

Unlike other impulse control disorders, trichotillomania is often resistant to SSRIs, but a Cochrane review by Rothbart et al. determined that NAC, as well as clomipramine and olanzapine (an antipsychotic), can be effective 60. NAC is an amino acid that acts as a glutamate modulator and can exert its effect by normalizing dysregulated extracellular glutamate in the nucleus accumbens: an area of the brain that plays a key role in motivation and reward 57. The dose of NAC for trichotillomania is 1,200 mg/day, with few adverse effects reported by patients 27. Some argue that the apparent efficacy of NAC in trichotillomania suggests could and should be tested for other impulse control disorders that involve scratching or pulling 59.

For the habit-tic deformity of the nail, a clinician discovered an economical and safe treatment that was effective in normalizing the nails of two patients after 3 to 6 months of use, made the patients apply a cyanoacrylate adhesive (instant glue) to the proximal nail fold of the affected nails 1 to 2 times per week, effectively forming a physical barrier to external trauma, although it is creative, this method does not necessarily cure the underlying motivation of patients to scratch their cuticles, and a relapse can be expected and, in fact, was seen in some patients, interestingly, this reconstituted treatment achieved normalization of the nail, and after the subsequent interruption of therapy, he was able to maintain normal nails 61. It is also important to note the possibility of developing contact dermatitis in response to cyanoacrylate [62][63][64].

Figure ??: Use of psychotropic medications to treat dermatological conditions 65.

It is known that certain psychotropic agents are useful in the treatment of dermatological conditions; if pruritus is the main problem, doxepine is the preferred agent; on the other hand, if pain predominates, such as burning, itching or irritation, amitriptyline is the preferred agent 65.

Doxepine: Is often used to treat pruritus when more conventional antipruritic agents, such as diphenhydramine 352 or hydroxyzine, are inadequate; there are several advantages of the use of doxepine for the control of pruritus 353 compared to conventional antipruritic agents; first, doxepine has a much greater affinity for histamine receptors. 354 than traditional antihistamines and therefore it can exert much more potent antipruritic effect, the affinity of 355 doxepine for the histamine (H1) receptor in vitro is approximately 56 times hydroxyzine and 775 times greater than 356 diphenhydramine; second, the therapeutic effect of doxepine is much longer and longer lasting than any of these 357 antihistamine medications because of its long half-life, doxepine is taken once a day, usually at bedtime to provide 358 359 a therapeutic benefit for 24 hours; therefore, patients with conditions that present with severe pruritus, such as 360 atopic dermatitis, who complain of waking up in the middle of the night, even if they are taking hydroxyzine or 361 diphenhydramine before bedtime, usually find calm when they switch to doxepin and can sleep all the time night; third, doxepine normalizes the architecture of sleep, when the patient spends more time in a deep state of sleep, 362 the excoriations decrease dramatically; doxepine may also be useful in the treatment of patients with chronic 363 urticaria or other histamine-mediated disorders who have failed traditional antihistamine treatment; there is no 364 good data on the optimal therapeutic blood level of doxepine for the treatment of conditions such as pruritus or 365 hives, a wide range of doses may be possible depending on each patient, for example, dose of doxepine sufficient 366 to control pruritus can vary from only 10 mg at bedtime (often used in liquid preparation doxepine 10 mg/cc) up 367 to the maximum dose for the treatment of depression 300 mg at bedtime and if a patient does not show an initial 368 therapeutic response, the The physician should consider gradually increasing the dose of doxepine according to 369 tolerance to the desired therapeutic response 65. 370

Amitriptyline: For various manifestations of pain sensations such as burning, itching or irritation, amitriptyline 371 372 is a preferred agent over doxepine due to better documentation of its effectiveness as an analgesic agent; when 373 eating disorders are used as analgesics, the required dose tends to be much lower than the dose required for its antidepressant effect; the patient can start with 25 mg at bedtime and start the maximum effective dose to use as 374 an analgesic, a dose of 50 mg/day or less should generally be sufficient; the side effects of amitriptyline are similar 375 to those of doxepine, namely sedatives, cardiac, anticholinergics and ?-adrenergic side effects, including orthostatic 376 hypotension, which can be problematic in elderly patients; adverse effects can be minimized by using the lowest 377 effective dose possible; if the patient is unable to tolerate amitriptyline, other eating disorders, such as imipramine 378 or designamine, may be used; dosage range for these medications are similar to those of amitriptyline; if these 379 new TCAs are not tolerated, SSRIs can be tried, there are some useful SSRI reports as analysics; additionally, 380 duloxetine, an SNRI, has an FDA indication for the treatment of chronic pain and can be considered in these 381 cases 65 . 382

383 16 VIII.

³⁸⁴ 17 Search Methodology

A computerized bibliographic investigation was conducted in the Pubmed search engine https://www. 385 ncbi.nlm.nih.gov/pubmed/, during the period from January 2019 to August 2019; using the following keywords 386 in English: Psychosomatic medicine, traditional medicine, complementary therapies, psychopharmacology, 387 psychotropic drugs; found 4,255 articles; articles with a level of evidence I, II and III were selected; with a 388 period of seniority of 20 years and for its content of scientific interest and originality a total of 4,190 articles were 389 excluded from the analysis: studies without specific description of the treatment of Psychosomatic medicine that 390 did not describe the relationship between psychopharmacology, psychotropic drugs and complementary therapies 391 ; so 65 articles were used. Microsoft Windows, version 6.3 (build 9600), from 2013 was used. 392

393 18 IX.

394 **19** Conclusion

In the clinical practice of dermatology, one in four patients who go to consultation with an acute or chronic dermatological disease is affected by a psychological/psychic disorder or a psychological/ psychiatric pathology triggers or aggravates a dermatological disease. They do not know it, and it is the doctor who must suspect that behind a dermatosis a psychiatric disorder can be hidden or vice versa. This must be confirmed by a specific systematic interrogation, and if it exists, it must be treated properly, thus contributing to cure the dermatosis consulted and the associated pathology. The most frequent psychiatric disorders in dermatological patients are anxiety, depression, psychosis and obsessive-compulsive disorders. But, while the patient with anxiety may 402 be more or less aware of his problem, depression, psychosis or obsessive-compulsive disorders usually present 403 themselves in a masked way or not recognized. Dermatologists must be aware of the potential for significant 404 improvement in the quality of life when addressing the psychic dimension of skin disease.

405 The relationship of mental pathologies and dermatological diseases: generally, it is bidirectional, it is necessary to analyze the impact that dermatological pathologies have on psychic disorders or vice versa and cut this cycle. 406 Depression is most often observed in patients with psoriasis; anxiety and depression, in patients with vitiligo, 407 pruritus, acne, alopecia areata and urticaria, anxiety more frequently in patients with rosacea and chronic chronic 408 lichen, psychosis in patients with delusional infestation and obsessive-compulsive disorder in trichotillomania and 409 onychophagy; finding numerous evidence for these pathologies. Thus, treating patients with mental processes 410 that triggered some dermatological pathology, remitting the cause we can control the skin disease and vice versa, 411 in the event that the dermatological disease triggers or exacerbates the psychic pathology, treating the skin 412 component will relieve the psychic pathology; the dermatologist, in the consultation must be empathetic, meet 413 the expectations of the patient and be optimistic, aspects of the clinical encounter that can foster a positive 414 therapeutic relationship; in addition, you must master the basic antistress mind-body techniques; that they can 415 keep stress at a non-harmful level at no cost; encouraging them to perform them in leisure time and to practice 416 them routinely to maintain their physical and mental balance, namely: upright posture, change of respiratory 417 418 pattern from thoracic to abdominal, muscle relaxation and meditation; You should also know and recommend, as 419 appropriate, various complementary therapies. Multidisciplinary services have been developed within specialties 420 and subspecialties such as dermatology, which can be operated by several specialists (group approaches) or by a single specialist with a multidisciplinary approach, the levels of intervention can vary from providing 421 tranquility and effective communication to specific psychotherapies and Psychopharmacological treatments, which 422

are applied, individually, to a careful balance between potential benefits and adverse effects.¹

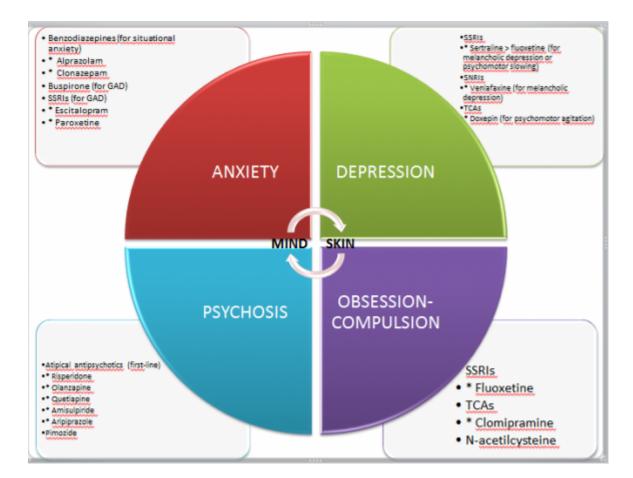


Figure 1:

Figure 2:

 $^{^{1}}$ Year 2019

19 CONCLUSION

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