

Integrated Physical and Mental Management of Psoriasis

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Abstract: Psoriasis, as a quintessential chronic inflammatory, recurrent, and systemic disorder, profoundly embodies the modern medical concept of "psychosomatic interaction" in its pathogenesis, progression, and prognosis. While modern medicine has achieved breakthroughs in targeted immunomodulation, it continues to grapple with challenges of recurrence, drug resistance, and long-term safety. This paper, grounded in the "biopsychosocial" medical model, systematically reviews and comparatively analyzes non-pharmacological intervention strategies for psychosomatic co-management of psoriasis within both Traditional Chinese Medicine (TCM) and Western medicine frameworks. In TCM, centered on the theories of "unity of form and spirit" and "five zang organs-five emotions," pentatonic therapy harmonizes visceral qi through sound wave resonance, while practices like Tai Chi and Baduanjin regulate meridians and stabilize mental states through "body regulation, breath regulation, and mind regulation," demonstrating potential in modulating the neuroendocrine immune network. In Western medicine, based on cognitive behavior and neuroscience, mindfulness therapy effectively modulates stress responses, improves mood, and reduces inflammation through non-judgmental awareness of the present moment, while cognitive behavioral therapy and psychoeducation aim to reconstruct disease cognition and correct maladaptive behaviors. This paper seeks to integrate Eastern and Western wisdom to provide theoretical foundations and practical pathways for constructing a multidimensional, comprehensive, and personalized prevention and treatment system for psoriasis, thereby transcending mere control of cutaneous symptoms to achieve holistic improvement in patients' quality of life.

1. Introduction

Psoriasis affects approximately 0.5%-3% of the global population, characterized clinically by well-demarcated erythematous plaques with silvery scales, often accompanied by arthritis, metabolic syndrome, and comorbid negative emotions. Modern pathological research has established that the disease is a T-cell-mediated immune-inflammatory disorder centered on the Th17 axis within a genetic context. However, the key factors driving this persistent disorder extend far beyond the biological level. Epidemiological surveys consistently show that up to 60% of

patients experience significant life stress events prior to onset or recurrence, while the prevalence of anxiety and depression among patients is 2-3 times higher than in the general population. This clearly reveals the essence of psoriasis as a classic psychosomatic disorder.^[1]

Psychological stress exacerbates cutaneous inflammation through activation of the hypothalamic-pituitary-adrenal axis and sympathetic nervous system, releasing glucocorticoids and catecholamines, which promote dendritic cell activation and cascade release of pro-inflammatory cytokines (e.g., TNF- α , IL-6, IL-23/IL-17). Simultaneously, the visibility of lesions, pruritus, and social discrimination act as chronic stressors, feeding back into anxiety and depression, forming a vicious cycle of "lesion-psychological stress-immune dysregulation-lesion exacerbation."^[2-4]

Facing this complex scenario, reliance solely on biological agents and immunosuppressants, while effective in rapid symptom control, fails to eradicate this cycle. The economic burden of medications, potential infection risks, and primary/secondary treatment failures in some patients necessitate a paradigm shift in clinical practice. Transitioning from "treating disease" to "treating the person," and from "skin-centered" to "patient-centered" approaches, integrating Eastern and Western non-pharmacological psychosomatic interventions has become an indispensable component of modern psoriasis management.

2. TCM Perspective: Nurturing Form and Spirit, Harmonizing Qi and Blood to Alleviate Psoriasis

In TCM, psoriasis is categorized under "white scales" and "dry lichen," with its core pathogenesis rooted in constitutional blood heat, compounded by emotional disturbances and dietary irregularities, leading to heat toxin accumulation in the nutritive blood, combined with wind-damp-heat pathogens, resulting in disharmony of qi and blood manifesting on the skin. Emotional factors ("internal injury by seven emotions") are considered the core triggers, particularly "liver depression."

2.1. Pentatonic Therapy: Five Tones Entering the Zang Organs, Regulating Emotions

Theoretical Basis: Originating from the "Yellow Emperor's Inner Canon," the "five tones therapy" theory is a concrete application of TCM's holistic view of "unity of heaven and man" and the "five zang organs-five emotions" correlation in non-pharmacological therapies. This theory correlates the five tones (Gong, Shang, Jue, Zhi, Yu) with the five zang organs (spleen, lung, liver, heart, kidney) and the five emotions (thought, sorrow, anger, joy, fear). Music is regarded as harmonious "sound wave medicine," resonating with specific frequencies of the zang organs to regulate their qi movement. For psoriasis patients with liver qi stagnation, Jue tone music, associated with wood and the liver, with its bright and vigorous sound, aids in liver dispersion and relieves stagnation.

Neurophysiological Mechanisms: Modern research confirms that specific musical structures can directly influence the limbic system (emotional center) and autonomic nervous system through auditory pathways. Soothing Jue tone music can reduce sympathetic tone and increase parasympathetic activity, manifesting as increased heart rate variability, slowed respiratory rate, and decreased cortisol levels, inducing deep relaxation and counteracting psychological stress.

Neuroendocrine Immune Network Regulation: A clinical observation by Wang Lina et al. randomized 60 patients with liver depression and blood stasis type plaque psoriasis into two groups. The control group received conventional topical treatment, while the observation group added daily one-hour Jue tone music intervention. After eight weeks, the observation group showed more significant reductions in anxiety and depression scores on the SCL-90 symptom checklist and PASI scores ($P < 0.05$), with more statistically significant decreases in serum stress markers cortisol and

pro-inflammatory cytokine IL-2 levels. This suggests pentatonic therapy may exert therapeutic effects through the pathway of "regulating emotions-inhibiting stress-reducing inflammation."^[5-6]

Central Mechanism Exploration: Animal experiments by Cheng Hongyu et al. provide deeper evidence. The study applied Gong and Yu tone music interventions to depression model mice, finding that the intervention group showed significantly reduced immobility time in the forced swim test and significantly increased levels of serotonin (5-HT) and norepinephrine (NE) in brain tissue. This indicates that pentatonic therapy may act at the level of central monoamine neurotransmitter metabolism, fundamentally improving emotional states.

2.2. Tai Chi and Baduanjin: Regulating Qi to Achieve Harmony, Guiding the Body to Achieve Softness

Theoretical Basis: Tai Chi and Baduanjin belong to the category of TCM Daoyin exercises, with the essence of "unity of intention, qi, and form." Through slow, smooth, and continuous body movements (body regulation), combined with deep, long, fine, and even abdominal breathing (breath regulation), and focused mental intention (mind regulation), they achieve a state of "straight bones and soft tendons, flowing qi and blood." For psoriasis patients, these practices can disperse liver qi (liver governs tendons), strengthen the spleen and stomach (spleen governs limbs and muscles), and stabilize the mind (heart houses the spirit), thereby harmonizing qi and blood and balancing yin and yang.^[7]

Systemic Anti-inflammatory and Immune Modulation Effects: A longitudinal study by Chen Jinxia's team recruited 60 female subjects with mild depression (including psoriasis patients) for a 16-week Tai Chi intervention. Results showed that compared to the static control group, the Tai Chi group had significantly improved Hamilton Depression Scale scores, and more notably, significant reductions in peripheral blood levels of key pro-inflammatory cytokines IL-6 and TNF- α . This provides direct evidence for Daoyin exercises producing systemic anti-inflammatory effects through mind-body practices.^[8]

Improving Autonomic Function and Stress Resilience: Research shows that long-term Tai Chi practice increases heart rate variability, a marker of autonomic balance and enhanced stress resilience. Good autonomic balance helps stabilize the HPA axis, reducing excessive inflammatory responses under stress.^[9]

Enhancing Quality of Life and Physical Function: Multiple studies on chronic disease patients indicate that Baduanjin and Tai Chi significantly improve sleep quality, reduce fatigue, and enhance joint flexibility, particularly beneficial for psoriasis patients with joint symptoms. Their group practice format also provides social support, alleviating stigma and loneliness.

3. Western Medicine Perspective: Regulating the Mind, Reshaping Cognition to Break the Cycle

Modern psychosomatic medicine, based on psychology and neuroscience, has developed a series of structured psychological and behavioral intervention techniques aimed at indirectly regulating physiological and pathological processes by changing patients' cognitive, emotional, and behavioral patterns.

3.1. Mindfulness Therapy: Awareness of the Present, Disrupting Automatic Pilot

Theoretical Basis and Core Techniques: Mindfulness therapy (e.g., Mindfulness-Based Stress Reduction MBSR, Mindfulness-Based Cognitive Therapy MBCT) centers on consciously, non-judgmentally attending to the present moment. Psoriasis patients often fall into a vortex of

negative "automatic pilot" thoughts, such as aversion to lesions, fear of recurrence, and concern about others' perceptions, continuously activating the stress system. Mindfulness training, through body scan, sitting meditation, and mindful yoga, helps patients learn to detach attention from catastrophic thoughts, facing bodily sensations and emotional fluctuations with openness and acceptance, thereby breaking the "thought-emotion-stress response" chain.^[10]

Neuroplastic Changes: Brain imaging studies reveal that long-term mindfulness practitioners exhibit increased prefrontal cortex activity (responsible for executive control and emotion regulation) and reduced gray matter density and reactivity in the amygdala (fear and stress center). These structural changes indicate enhanced top-down emotion regulation capabilities.

Neuroendocrine and Immune Indicator Improvements: A multicenter RCT by Wang Binbin et al. included 114 psoriasis patients with anxiety and depression. The intervention group received a 12-week standardized MBSR course, showing more significant reductions in HAMA and HAMD scores, improved DLQI quality of life index, and significantly lower disease recurrence rates at six months compared to the conventional treatment control group. Subsequent biological tests revealed more pronounced decreases in serum levels of inflammatory markers like C-reactive protein and IL-6 in the mindfulness group, providing clinical support for the "mindfulness anti-inflammatory" hypothesis.^[11]

Behavioral Changes and Treatment Adherence Improvement: Through mindfulness practice, patients can more peacefully accept their disease and treatment, reducing anxiety-induced scratching behaviors and more actively and regularly using prescribed medications, indirectly improving clinical outcomes.

3.2. Cognitive Behavioral Therapy and Psychoeducation: Reconstructing Beliefs, Empowering Patients

Cognitive Behavioral Therapy: CBT focuses on identifying and challenging dysfunctional automatic thoughts and core beliefs related to psoriasis. Through cognitive restructuring techniques, it helps patients establish more realistic and positive alternative thoughts (e.g., "lesions are just a part of me and do not define my value"), thereby reducing emotional distress and avoidance behaviors. Research confirms that CBT effectively reduces stigma, anxiety, and depression levels in psoriasis patients.

Structured Psychoeducation: Knowledge is power. Systematic psoriasis education, including disease nature, triggers, treatment options, and prognosis, significantly enhances patients' self-efficacy. When patients understand disease patterns and learn self-management (e.g., skin care, recognizing recurrence signs), their sense of loss of control and fear decrease markedly, and treatment adherence and life initiative improve significantly. Group psychoeducation also promotes experience sharing and emotional support among patients, fostering a positive treatment atmosphere.^[12-13]

Discussion: Integrating Eastern and Western Approaches, Constructing a Psychosomatic Co-Management Model for Psoriasis

Non-pharmacological interventions from both TCM and Western medicine, though rooted in different cultural and philosophical backgrounds, converge in the psychosomatic co-management of psoriasis, demonstrating significant complementarity.

Theoretical Complementarity: TCM approaches from a "holistic" perspective, emphasizing "yin-yang and qi-blood" balance, harmonizing internal qi movement and environmental relationships through pentatonic therapy and Daoyin exercises. Western medicine approaches from "cognition and behavior," focusing on brain information processing and response patterns, reshaping mental habits through mindfulness and CBT. These approaches, one macro and one micro,

one emphasizing "qi" and the other "intention," together constitute a comprehensive understanding and intervention of the "mind."

Practical Integration: In clinical practice, these methods can be personalized and combined to form "integrative psychosomatic intervention plans."

Acute Stress Phase: For patients with significant anxiety, mindfulness breathing exercises or listening to soothing Jue tone music can be prioritized to quickly calm emotions.

Chronic Maintenance Phase: Patients are recommended to participate in Tai Chi or Baduanjin courses, combined with group CBT or psychoeducation, improving cognition and gaining support while strengthening the body.

Comprehensive Management: Integrate mindfulness attitudes into daily life, supplemented by personalized pentatonic listening as a relaxation method.

Future research should focus on conducting more rigorously designed large-sample, multicenter RCTs, utilizing modern technologies like genomics, proteomics, and brain functional imaging to deeply reveal the molecular, cellular, and systemic level targets and networks of these non-pharmacological therapies, providing high-level evidence for their standardized and precise application.

4. Conclusion

The prevention and treatment of psoriasis have entered a new era of "mind-body co-management." TCM's pentatonic therapy, Tai Chi, and Baduanjin, with their profound theoretical foundations and holistic regulatory perspectives, demonstrate unique advantages in regulating emotions and balancing immunity. Western medicine's mindfulness therapy and cognitive behavioral therapy, grounded in empirical evidence, show clear efficacy in changing cognitive patterns and regulating stress responses. Integrating these two wisdom systems to construct a multidimensional, comprehensive, and personalized non-pharmacological intervention plan not only effectively complements biomedical treatments, enhancing efficacy and reducing recurrence, but fundamentally empowers patients, reshaping their physical and mental health and quality of life, representing the inevitable direction of future psoriasis management.^[14]

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