International Journal of Medicine
pISSN 1468-3814 | eISSN 2667-7008
https://theinternationalmedicine.com/

Case Report *DOI: 10.61336/im/26-2-12*

Psychiatric Medications and Cardiac Risk in Dermatology Patients: An Overlooked Interface Between Psychodermatology and Cardiovascular Medicine.

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Received: 10-02-2026
Revised: 16-02-2026
Accepted: 09-03-2026
Published: 08-04-2026

Abstract

Background: Dermatological disorders such as psoriasis, atopic dermatitis, and hidradenitis suppurativa are increasingly recognized as systemic inflammatory conditions associated with elevated cardiovascular (CV) risk. Psychiatric comorbidities including depression, anxiety, and body dysmorphic disorder are common in these patients, often necessitating psychotropic medications. However, many psychiatric drugs are associated with cardiometabolic adverse effects and electrophysiological disturbances. ***Objective:*** To review the cardiovascular risks associated with commonly prescribed psychiatric medications in dermatology patients and propose a practical risk stratification and monitoring approach. ***Methods:*** Narrative review of current literature focusing on psychotropic medications, dermatologic disease-associated cardiovascular risk, and drug-related cardiac adverse effects. ***Results:*** Psychotropic medications contribute to cardiovascular risk via QT prolongation, arrhythmogenesis, weight gain, insulin resistance, dyslipidemia, and hypertension. Antipsychotics and tricyclic antidepressants carry the highest risk, while SSRIs are comparatively safer but not devoid of cardiac effects. Dermatology patients with pre-existing systemic inflammation exhibit additive cardiovascular vulnerability. ***Conclusion:*** A multidisciplinary approach integrating dermatology, psychiatry, and cardiology is essential. Careful drug selection, baseline cardiovascular evaluation, and ongoing monitoring can mitigate risks.

Keywords: Psychodermatology, Cardiovascular risk, QT prolongation, Antipsychotics, SSRIs, Psoriasis.

INTRODUCTION

Psych dermatology represents the intricate interplay between skin and mind, wherein psychiatric disorders frequently coexist with chronic dermatological diseases. Conditions such as psoriasis, atopic dermatitis, and hidradenitis suppurativa are not merely cutaneous but systemic inflammatory disorders with well-established associations with cardiovascular morbidity.

Simultaneously, psychiatric comorbidities—particularly depression, anxiety disorders, and somatic symptom disorders—are prevalent in dermatology patients, significantly impairing quality of life and treatment outcomes. The management of these psychiatric conditions often necessitates the use of psychotropic medications.

However, many psychotropic agents are implicated in adverse cardiovascular outcomes, including QT interval prolongation, arrhythmias, metabolic syndrome, and sudden cardiac death. When combined with the baseline cardiovascular risk inherent in dermatologic conditions, this creates a “double-hit” phenomenon.
This review explores the cardiovascular implications of psychiatric medications in dermatology patients and highlights the need for integrated care.

HISTORY

Dermatological Diseases and Baseline Cardiovascular Risk

Psoriasis

Psoriasis is a chronic immune-mediated disease associated with systemic inflammation driven by TNF-α, IL-17, and IL-23 pathways. It is strongly linked to:

- Atherosclerosis
- Metabolic syndrome

- Increased risk of myocardial infarction and stroke

Hidradenitis Suppurativa

Characterized by chronic inflammation and recurrent abscesses, HS is associated with:

- Obesity
- Insulin resistance
- Elevated cardiovascular mortality

Atopic Dermatitis

Moderate-to-severe cases show:

- Increased risk of hypertension
- Dyslipidemia
- Chronic inflammatory burden

Psychiatric Comorbidities in Dermatology

Common psychiatric conditions include:

- Major depressive disorder
- Generalized anxiety disorder
- Body dysmorphic disorder
- Delusional infestation
- Psychogenic pruritus

These conditions often require long-term pharmacotherapy.

Cardiovascular Effects of Psychiatric Medications

1. Antidepressants

Selective Serotonin Reuptake Inhibitors (SSRIs)

- Examples: sertraline, fluoxetine, escitalopram
- Generally safer in cardiac patients
- Potential risks:
  - Mild QT prolongation (notably citalopram, escitalopram)
  - Hyponatremia leading to arrhythmia (indirect)

Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs)

- Examples: venlafaxine, duloxetine
- Risks:
  - Hypertension (dose-dependent)
  - Tachycardia

Tricyclic Antidepressants (TCAs)

- Examples: amitriptyline, nortriptyline
- High cardiac risk:
  - QT prolongation
  - Conduction delays
  - Ventricular arrhythmias
- Should be avoided in high-risk patients

2. Antipsychotics

Typical Antipsychotics

- Haloperidol, chlorpromazine
- Risks:
  - Significant QT prolongation
  - Torsades de pointes
  - Sudden cardiac death

Atypical Antipsychotics

- Olanzapine, risperidone, quetiapine, clozapine
- Major concerns:
  - Weight gain
  - Dyslipidemia
  - Insulin resistance
  - Myocarditis (clozapine)

3. Mood Stabilizers

Lithium

- Can cause:
  - Sinus node dysfunction
  - T-wave changes
  - Bradyarrhythmias

Valproate

- Associated with:
  - Weight gain
  - Metabolic syndrome

4. Anxiolytics

Benzodiazepines

- Minimal direct cardiac risk
- Indirect risks:
  - Sedation-related respiratory depression in vulnerable patients

Mechanisms of Cardiovascular Risk

Psychotropic medications affect cardiovascular health via:

1. Electrophysiological Effects
   - QT prolongation via potassium channel blockade
2. Autonomic Dysfunction
   - Altered sympathetic-parasympathetic balance
3. Metabolic Effects
   - Weight gain
   - Insulin resistance
   - Dyslipidemia
4. Inflammatory Modulation
   - Potential interaction with systemic inflammatory pathways

Clinical Implications in Dermatology Patients

Dermatology patients often exhibit:

- Pre-existing systemic inflammation
- Sedentary lifestyle
- Obesity and metabolic syndrome

When psychotropic medications are added, there is:

- Additive cardiovascular risk
- Increased likelihood of adverse events

Risk Stratification and Monitoring

Baseline Assessment

- ECG (QTc interval)
- Blood pressure
- BMI and waist circumference
- Fasting glucose / HbA1c
- Lipid profile

Ongoing Monitoring

- ECG at regular intervals for high-risk drugs
- Metabolic monitoring every 3–6 months
- Electrolyte evaluation

Practical Prescribing Approach

Low Cardiovascular Risk Patients

- SSRIs preferred
- Avoid high-dose TCAs

Moderate Risk

- Use SSRIs/SNRIs cautiously
- Regular monitoring

High Cardiovascular Risk

- Avoid:

- TCAs
- High-risk antipsychotics

• Prefer:

- Sertraline
- Low-dose escitalopram (with ECG monitoring)

DISCUSSION

The intersection of dermatology, psychiatry, and cardiology represents an emerging clinical challenge. While psychotropic medications are indispensable for managing psychiatric comorbidities, their cardiovascular safety profile must be carefully considered.

Dermatological diseases contribute to systemic inflammation, which itself accelerates atherosclerosis. The addition of psychotropic drugs—particularly those with metabolic and electrophysiological adverse effects—may amplify this risk.
A collaborative, multidisciplinary approach is essential. Dermatologists should be aware of psychotropic cardiac risks, psychiatrists should consider dermatological inflammatory burden, and cardiologists should be involved in high-risk cases.

CONCLUSION

Psychiatric medications significantly influence cardiovascular risk in dermatology patients. Understanding drug-specific cardiac effects, combined with patient-specific risk factors, is crucial for safe prescribing. Integrated care and structured monitoring protocols can minimize adverse outcomes and improve overall patient health.

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