

Hyperhidrosis Improved by Samhwangsasim-Tang: A Case Report

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Abstract: Hyperhidrosis is a disorder characterized by excessive sweating beyond physiological requirements, which significantly interferes with daily functioning and quality of life. It affects approximately 4%–5% of the population worldwide, yet its underlying pathophysiology remains unclear, with proposed mechanisms involving autonomic nervous system dysregulation, metabolic imbalance, and psychological factors. Here, we describe a case of chronic hyperhidrosis in which spontaneous sweating and facial flushing improved markedly following administration of Samhwangsasim-tang as monotherapy. A 66-year-old man presented with chronic hyperhidrosis occurring without identifiable triggers. Even minimal physical activity caused profuse craniofacial sweating accompanied by facial flushing, which was exacerbated by heat exposure and conditions associated with increased core body temperature. Based on his symptom pattern, Samhwangsasim-tang extract granules were prescribed. No other treatments, including acupuncture, cupping therapy, or conventional medications, were administered during the treatment period. Symptom severity was evaluated using the Numeric Rating Scale (NRS) and the Hyperhidrosis Disease Severity Scale (HDSS). After approximately 42 days of treatment, spontaneous sweating resolved completely (NRS 10 → 0; HDSS 4 → 1), and facial flushing was reduced to 20%–30% of baseline severity (NRS 10 → 2–3). This case suggests that the heat-clearing, anti-inflammatory, and metabolic-regulating properties of Samhwangsasim-tang may contribute to the normalization of skin temperature, sweating regulation, and peripheral circulation. Further clinical and mechanistic studies are warranted to elucidate its therapeutic potential in hyperhidrosis.

Keywords: case report, hyperhidrosis, flushing, Samhwangsasim-tang

Introduction

Hyperhidrosis is a disorder that interferes with daily life, characterized by sweating in excess of physiological requirements. Alcohol consumption, medication use, psychiatric illness, metabolic disorders, and psychological factors have all been implicated in its onset.¹ This condition is reported to affect approximately 4–5% of the general population,² however, its pathophysiology remains incompletely understood. Given that the eccrine glands—densely distributed on the palms, soles, forehead, and axillae—are innervated by sympathetic cholinergic fibers, the development of hyperhidrosis is presumed to be closely related to autonomic dysregulation. Hyperhidrosis is broadly classified into primary and secondary forms. Primary hyperhidrosis typically occurs without an identifiable underlying cause, whereas secondary hyperhidrosis is caused by systemic conditions including metabolic–endocrine disorders, cardiovascular diseases, or respiratory illnesses.¹

Hyperhidrosis can be treated using topical aluminum chloride, botulinum toxin injection, or surgical interventions. However, these conventional treatments are limited by the potential for various side effects and a frequent tendency for hyperhidrosis to recur even after treatment.¹ In addition, hyperhidrosis substantially impairs daily and social functioning;



in particular, craniofacial or palmar hyperhidrosis may affect not only patients themselves but also those around them, thereby exacerbating psychological distress.³

Samhwangsasim-tang, a classical formula recorded in the Chinese medical classic *Sanghanron*,⁴ exhibits anti-inflammatory⁵ and metabolic-modulatory activities,⁶ and has been applied to treat conditions such as hypertension,⁷ inflammatory gastrointestinal diseases,⁸ and cardiac disorders.⁷ Jin et al⁹ previously reported that Samhwangsasim-tang exerts vasodilatory effects by reducing phosphorylation of the myosin phosphatase target subunit, whereas Pak et al⁴ demonstrated its neuroprotective effects through attenuation of neuronal apoptosis and oxidative stress.

Based on these anti-inflammatory, metabolic-modulatory, and vasodilatory effects of Samhwangsasim-tang, it has been hypothesized to be beneficial in alleviating heat-related sweating disorders, given that body temperature regulation and sweating are influenced by the autonomic nervous system, inflammatory, and metabolic pathways.

Despite the growing interest in the pharmacological properties of Samhwangsasim-tang, no clinical reports, to our knowledge, have evaluated its use as the treatment of hyperhidrosis. Herein, we describe a patient with hyperhidrosis in whom spontaneous sweating and flushing improved following administration of Samhwangsasim-tang, thereby addressing an existing gap in the literature and presenting a potentially novel therapeutic observation.

Case Presentation

The patient (Table 1) was a 66-year-old man. His chief complaints at first visit were sweating and flushing. His disease showed a chronic course with exacerbation between February and March 2025. The patient had a past history of gastric cancer diagnosed in 2022 and treated surgically. He had no relevant family history.

The patient, who had a long-standing tendency to excessive sweating, presented to our clinic on May 22, 2025, reporting worsening hyperhidrosis from February to March 2025 without any identifiable precipitating event. The patient's excessive craniofacial sweating occurred repeatedly during work and impaired daily functioning. No specific antecedent symptoms or diseases that could explain hyperhidrosis were identified. Based on these findings, the patient was diagnosed with hyperhidrosis. No systemic, endocrine, neurologic, or infectious abnormalities suggestive of secondary hyperhidrosis were identified on history taking or physical examination. Previous clinical guidelines indicate that laboratory testing is not necessary unless findings explicitly point toward a secondary cause.¹ Accordingly, no additional laboratory investigations were performed for this patient.

Regarding the Korean medicine diagnosis and rationale for formula selection, the patient reported heat intolerance and warm hands and feet, with worsening of symptoms under conditions of increased body heat (eg, hot weather and physical activity). We therefore inferred that the sweating was related to elevation of deep/core body temperature and selected Samhwangsasim-tang as the therapeutic intervention, given its described anti-inflammatory,⁵ metabolic-modulatory,⁶ and body-heat-reducing (“heat-clearing”) properties.¹⁰

Table 1 Systematic Examination of the Patient's Condition

Bowel Movements	Reports Regular, Comfortable Defecation.
Urination	Voids comfortably without difficulty.
Cold/heat	Heat intolerance; hands and feet tend to be warm.
Appetite	Robust appetite; finds it difficult to tolerate hunger.
Chest	Denies chest discomfort.
Digestion	Reports good digestion.
Sleep	Sleeps well.
Others	Overall physical stamina is good; experiences occasional episodes of rising body heat.

Table 2 The Symptom Evaluation Index

		Symptom Severity
Numeric Rating Scale (NRS)	Sweating Flushing	0 (None) - 10 (Severe)
Hyperhidrosis Disease Severity Scale (HDSS)		1 - 4

Table 3 Prescription of Samhwangsasim-Tang

Name of Natural Medicine (Herbal Medicine)	Weight (g)
<i>Coptis japonica</i> Makino	0.23
<i>Scutellaria baicalensis</i> Georgi	0.56
<i>Rheum palmatum</i> Linné	1.28
<i>Rehmannia glutinosa</i> (Gaertn.) DC.	0.45
Total Amount	2.52

Outcome measures (Table 2) included the following: (1) Numeric Rating Scale (NRS), at each visit, the severities of spontaneous sweating and flushing were quantified using an integer 0–10 scale; (2) Hyperhidrosis Disease Severity Scale (HDSS), the HDSS questionnaire was administered to assess the severity and impact of hyperhidrosis.

Subsequently, interventions (Table 3) included Samhwangsasim-tang extract granules (Hanpoong Pharm. Co., Seoul, Republic of Korea), dosed at two sachets per dose, taken orally thrice daily, 30 minutes after meals. No concomitant treatments (acupuncture, cupping, or conventional pharmacotherapy) were provided.

During the treatment period (Figure 1) of 42 days (2025.05.22–2025.07.02), the patient reportedly ingested a total of 156 sachets.

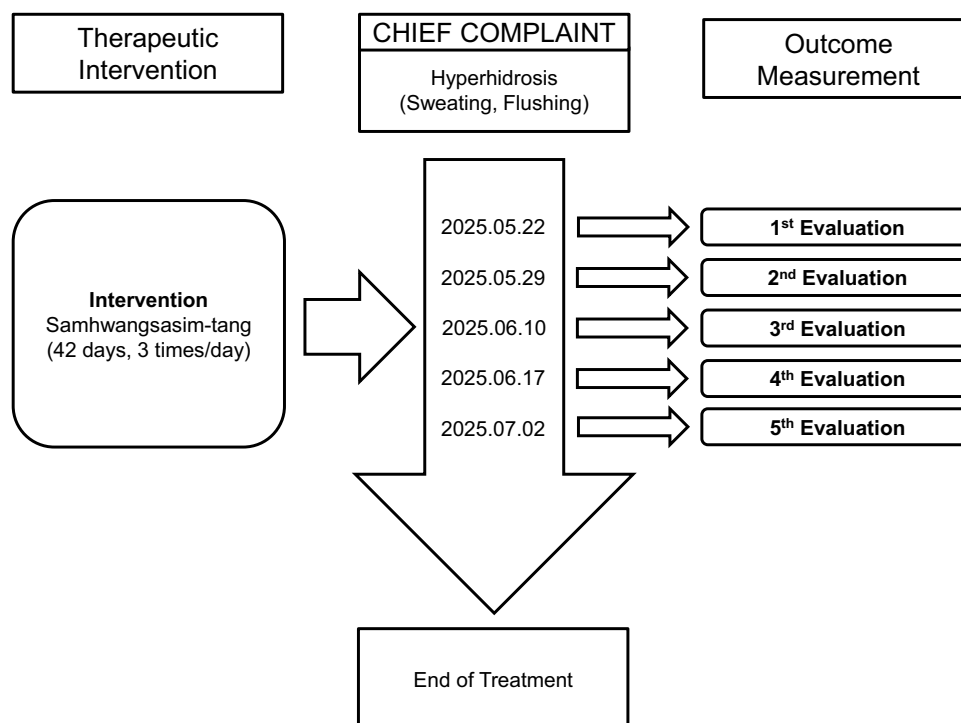
**Figure 1** Treatment Timeline.

Table 4 Hyperhidrosis Symptom Progression

		2025. 05.22	2025. 05.29	2025. 06.10	2025. 06.17	2025. 07.02
Numeric Rating Scale (NRS)	Sweating	10	6	4	2-3	0
	Flushing	10	6	4	2-3	2-3
	Total	20	12	8	4-6	2-3
Hyperhidrosis Disease Severity Scale (HDSS)		4	3	2	2	1

The patient's clinical course (Table 4) was as follows:

(1) May 22, 2025: The patient reported that even mild activity provoked flushing (NRS score 10) and marked craniofacial sweating (NRS score 10). Sweating occurred and worsened with physical exertion and hot weather. The patient did not perceive a relationship between mental tension, stress, and sweating.

(2) May 29, 2025: Sweating decreased and flushing modestly improved (spontaneous sweating NRS 10 → 6; flushing NRS 10 → 6). His stools became slightly loose without diarrhea, and no other adverse effects related to the medication were reported.

(3) June 10, 2025: Further improvement was noted (spontaneous sweating NRS 6 → 4; flushing NRS 6 → 4).

(4) June 17, 2025: Symptoms improved to approximately 20–30% of the exacerbation level (spontaneous sweating NRS 4 → 2–3; flushing NRS 4 → 2–3). Despite the transition to summer and hotter weather, sweating continued to decline.

(5) July 2, 2025: Spontaneous sweating resolved (NRS 0), and flushing remained improved (previously NRS 2–3).

Discussion

Hyperhidrosis is characterized by sweating that exceeds physiological needs.¹ In many cases, a diagnosis can be established clinically based on history and symptom characterization, and additional testing is often unnecessary when the presentation is typical.^{11,12} Therapeutic options are broadly classified into nonsurgical and surgical modalities. Nonsurgical approaches include topical and systemic pharmacotherapy, iontophoresis, and botulinum toxin injections, whereas surgical options include local cutaneous procedures and sympathectomies.¹¹

Complementary and alternative approaches for the treatment of hyperhidrosis have previously been explored. Sidek et al¹³ reported that *Curcuma xanthorrhiza* Roxb. exhibits antimicrobial and anhidrotic properties, and may mitigate hyperhidrosis and associated bromhidrosis. Further, Zhu et al¹⁴ described significant improvement of hyperhidrosis in a 16-year-old boy with acupuncture combined with Cupressus Leaf Tea administration.

Samhwangsasim-tang—composed of *Coptis japonica* Makino, *Scutellaria baicalensis* Georgi, and *Rheum palmatum* Linné—is a classical prescription applied to various conditions, including hypertension⁷ and inflammatory gastrointestinal disorders.⁸ *Coptis japonica* Makino has been described as exerting anti-inflammatory¹⁵ and metabolic-modulatory effects¹⁶ and is used for fever, inflammation, and abdominal pain.¹⁷ *Scutellaria baicalensis* Georgi is traditionally employed for gastrointestinal complaints, and has been ascribed antitumor, antiviral, antibacterial, anti-inflammatory, antioxidant, and neuroprotective activities.^{10,18} Conversely, *Rheum palmatum* Linné is frequently used for gastrointestinal disorders accompanied by constipation and has been associated with antiallergic¹⁹ and vasorelaxant properties.²⁰ Considering these pharmacological profiles, Samhwangsasim-tang may act as a multi-component formulation with anti-inflammatory, metabolic-modulatory, vasodilatory, and heat-reducing (“heat-clearing”) effects.

The patient was a 66-year-old man with a stocky body habitus who presented with hyperhidrosis that worsened without a clear precipitate between February and March 2025. Even mild activity provoked profuse craniofacial sweating that interfered with daily life (NRS score, 10), accompanied by subjective flushing. He reported heat intolerance and warm extremities, with sweating aggravated by conditions associated with increased body heat (eg, physical activity and hot weather). On this basis, the condition was interpreted as hyperhidrosis related to elevated core temperature, and Samhwangsasim-tang was prescribed for its putative deep-temperature-lowering and metabolic-modulatory effects. In

this case, we used a Samhwangsasim-tang granule containing *Rehmannia glutinosa* (Gaertn.) DC. in addition to *Coptis japonica* Makino, *Scutellaria baicalensis* Georgi, and *Rheum palmatum* Linné. This reflects the general tendency of modern herbal pharmaceutical preparations to add supplementary herbs to broaden clinical indications.

Approximately 42 days after initiating treatment, sweating improved to within the normal range, and flushing decreased to 20–30% of the baseline level (spontaneous sweating NRS 10 → 0; flushing NRS 10 → 2–3; HDSS 4 → 1). The patient reported that, even during activity in hot weather, sweating was limited, and the heat sensations that previously accompanied sweating diminished to two or three brief episodes per day. The patient expressed satisfaction, stating that after treatment, sweating and flushing were relieved, allowing him to lead a smooth daily life, even during hot seasons.

This single-patient case report has inherent limitations, as the mechanism underlying the improvement of hyperhidrosis observed in this case cannot be elucidated solely by a single case report. Although Samhwangsasim-tang exhibits properties such as anti-inflammatory, metabolic-regulating, and vasodilatory effects, these characteristics do not establish a causal link between these properties and symptom improvement. The mechanistic explanations presented in this study should be regarded as hypothetical and exploratory, and should not be prematurely generalized.

Furthermore, this study has the limitation of lacking objective sweat measurement methods, such as gravimetry, minor starch-iodine testing, or thermoregulatory sweat testing. Since the symptom evaluation in this study relied solely on subjective scales (NRS and HDSS), it limits the objectivity and quantitative nature of the results.

Several confounding factors should also be considered. The patient's age and history of gastric cancer surgery showed no temporal or symptomatic correlation with the sweating symptoms. Although the treatment was conducted during the hot and humid summer months, when sweating generally worsens, the potential influence of environmental factors, placebo effects, or spontaneous remission cannot be entirely excluded.

Consequently, this case should be interpreted as hypothesis-generating, and further research is warranted to delineate the therapeutic scope of Samhwangsasim-tang, ideally through prospective studies with standardized outcome measures and appropriate controls.

However, this report is notable in that, to our knowledge, it is the first case of hyperhidrosis that improved with Samhwangsasim-tang monotherapy. Concurrent improvement in spontaneous sweating and flushing after administration of Samhwangsasim-tang suggests that its anti-inflammatory, heat-reducing, and metabolic-modulatory actions may favorably influence cutaneous metabolism and peripheral circulation. Hyperhidrosis is a difficult condition to treat, and achieving complete resolution often requires a long treatment period. In this case, symptom improvement was observed in a patient with hyperhidrosis following the administration of Samhwangsasim-tang granules for a relatively short duration (42 days). These findings suggest that this alternative therapeutic approach may represent a feasible adjunctive option for the alleviation and management of hyperhidrosis. Given the observed improvements, this raises the possibility that Samhwangsasim-tang could be considered for treating the symptoms or conditions hypothesized to arise from elevated body heat or metabolic dysregulation.

Conclusions

In this single-patient case, clinically meaningful improvement in hyperhidrosis was observed following administration of Samhwangsasim-tang. After approximately 42 days of treatment, spontaneous sweating resolved (NRS 10 → 0; HDSS 4 → 1), and flushing decreased to about 20–30% of the baseline level (NRS 10 → 2–3).

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Ethical Considerations

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki. The research protocol was reviewed and approved by the Institutional Review Board of Wonkwang University (IRB No. WKIRB-202510-BM-090). According to the IRB determination, this case report involving de-identified patient information was considered ethically appropriate for publication. Written informed consent for publication of this case was obtained from the patient. All patient information was anonymized to ensure patient confidentiality.

Disclosure

The authors report no conflicts of interest in this work.

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