

The Concept of Samyoga Viruddha Siddhanta in the Context of Drug Interactions and its Implications in Clinical Efficacy and Safety

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Abstract—Background: Samyoga Viruddha (combination incompatibility) is a classical Ayurvedic principle describing harmful effects arising from certain combinations of food or drugs. Its conceptual overlap with modern food drug and drug - drug interactions has implications for clinical safety and therapeutic efficacy. **Methods:** Critical literature review of classical texts and modern reviews and studies on food–drug interaction.

Index Terms—Ayurveda, cytochrome P450, drug safety, food - drug interactions, Samyoga Viruddha, Viruddha Ahara.

I. INTRODUCTION

Ayurveda, the traditional health care system, contribute a strong supportive frame work for health and wellbeing of mankind. Ayurveda focus on the complete healing of mankind through physical psychological and spiritual aspects of life there by ensuring wholesome living.

Ayurveda emphasizes holistic health and disease prevention. The Samyoga Viruddha Siddhanta explains that certain substances, harmless alone, become harmful when combined improperly. Classical sources (Charaka and Sushruta) described Samyoga Viruddha and listed numerous examples and resultant disease states. These kinds of food may not cause immediate issues or disease in body. The toxicity exerted by Samyoga Virudha drugs get nullified due to factors like age, immunity power, proper Jrana sakthi etc. The principle aligns with modern concerns about food–drug and drug–drug interactions affecting therapeutic outcomes and safety.²

यत् किञ्चिद्विषमास्त्राय न निर्हरति कायतः ।

आहारजातं तत् सर्वमहितायोपपद्यते ॥ Cha/su/26/85

The entire diet or drug, which excites the dosa but does not eliminate it out of the body, becomes harmful. The rapid change in dietary habits and multiple usage of different medications in modern society increases the chance of such harmful interactions, making Samyoga Viruddha an urgently relevant concept for contemporary clinical practice

The Samyoga Virudha Siddhanta is an Ayurvedic concept that posits certain substances, while safe or even beneficial alone, produce harmful or toxic effects when consumed or combined improperly.¹ The unwholesome effects occurring in body due to combining incompatible drugs. The classical references available in Charaka Samhita's Atreya Bhadrakapya Adhaya and the Sushruta Samhita's Hitahitiyam Adhyaya. Samyoga means combination and Virudha means incompatible or the combination of two or more items could produce a disturbance in body's equilibrium.

This principle of incompatibility, when applied to modern understanding of drug interaction, highlights the potential for reduced clinical efficacy and significant safety concerns through complex biochemical and physiological antagonisms. The effect of incompatibility in disease manifestation is very important nowadays as the food and lifestyle patterns have changed resulting in the increase of the toxic metabolic waste products in the body. This results in the manifestation of new disease, causing challenge to treatment.

The ayurvedic concepts play an important role in restoring metabolic balance, digestive health and overall well-being of individuals. Knowledge of Samyoga Viruddha is very much crucial, as it helps avoiding certain aspects and promote or educate in preventing diseases

Mechanism that links Samyoga Virudha to drug interaction

The effects or side effects of long-term conception of Samyoga Virudha can be analysed through in vivo studies, blood value examination, toxicity studies

The incompatible food releases more toxic substances in body and thereby causing hindrance in proper drug metabolism and reduces therapeutic effects.

The enzymatic activities of major enzymes involved in metabolism like cytochrome P450, esterase, P-glycoproteins get altered or diminished by the accumulating xenobiotics and toxins from incompatible foods.³ The pharmacodynamics and pharmacokinetic effects of drug is very much impaired due to the prolonged usage of Samyoga Virudha Aharas.

The polyphenols or flavonoids are used widely to reduce the toxicity caused due to Samyoga virudha as they are known for its anti-oxidant activities.

Classical references about Samyoga Virudha⁴

Samyoga (combination)

योगः सह संयोग उच्यते । द्रव्याणां द्वन्द्वसर्वैककर्मजोऽनित्य एव च ॥ Cha/su/26/32 ॥

Samyoga is combining two or more substances.

1. Dvandva Karmaja- combination of two substances.
2. Sarva Karmaja- combination of many substances.
3. Eka Karmaja- combination of one active substance with another.

These combinations are Anitya (transient).

Chakrapani Datta Ayurveda Dipika -

सहेति मिलितानां द्रव्याणां योगः प्राप्तिरित्यर्थ

Combination of more than two substance in a preparation is called Yoga or Samyoga.

अनित्य इति संयोगस्य कर्मजत्वेनानित्यत्वं दर्शयति

Samyoga is always Anitya.

Chakrapanidatta gives example of Nikucha for Samyoga Viruddha. However, ripened Nikucha is hostile with black gram, soup, jaggery and ghee.

Consuming food items which are not supposed to combine with each other is Samyoga Viruddha. Especially Amla rasa fruits with milk.

E.g : - Strawberry milkshake, Banana milk shake.

Charaka samhita/ Su /26/102-103, has explained about Virudha concept in that Samyoga Virudha explained with the example of Pakva Lakucha (Artocarpus lakoocha) and Masha Yusha (Phaseolous radiatus).

Diseases occurring due to intake of Virudha Ahara

As per Charaka samhita the following diseases are caused due to intake of Virudha Aahara - Shandya (impotency), Andhya (blindness), Visarpa, Jalodara, Viphota, Unmada, Bhagandara, Mada, Adhmana, Galagraha, Pandu, Amaya, Kilasa, Kushtha, Grahani, Gada, Shotha, Amlapitta, Jwara, Peenasa, Santana Dosh and even Mrutyu.

Treatment of diseases aggravated by Viruddha Ahara

Acharya Charaka mentioned that diseases caused by intake of Viruddha Aahara can be cured by following therapy Vamana Karma (Medicated Emesis) Virechana (Purgation), administration of antidotes (Administration of substances which are of converse qualities), taking prophylactic measures (Samsamana)

Strategies to minimise risk due to Samyoga Virudha

The clinicians should consider dietary combinations as potential modifiers of pharmacotherapy for those drugs with narrow therapeutic windows

Educating patients about the high-risk incompatible combinations identified in both classical and modern literature and the disease possibilities.

Encourage regular exercise and oleation (Singdha therapies) to mitigate the effects of Virudhaahara. The herbs like Haritaki, Trikatu, Amlaki, Triphala and Guduchi can be used on a regular basis as a preventive aspect of impacts caused by Samyoga virudha

Detailed history taking and documentation about adverse drug reactions. Guidelines for ensuring food traditional medicine drug interactions in safety aspects. Ayurvedic integration of modern pharmacology for the purpose of evidence-based analysis will be beneficial to mitigate and identify harmful combination effects.

II. CONCLUSION

The effects of drug and concept of Samayoga Virudha are interrelated as a less toxic and more stable gut

health which is necessary for proper absorption, digestion, metabolism, excretion, drugs uptake and therapeutic actions. Samyoga Viruddha offers a useful traditional framework that aligns with modern mechanisms (enzyme modulation, transporter interference, and pro-oxidant effects) influencing drug ADME and pharmacodynamics. Hence the concept of Samyoga virudha has got utmost importance, considering the fast-changing food and life style patterns along with arousal of new disease variants in the present era.

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