



AYURVEDA PERSPECTIVE OF NATURAL DRUG INTERACTION: A LITERATURE REVIEW

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ABSTRACT

The ayurveda system is practicing in India since 1500 BC which focuses towards the maintaining of normal health. The ayurveda system also gives importance to the safety of drugs. The traditional system of medicine utilizes various therapeutic procedures, ayurveda formulations and herbs for the management of different diseases. The use of these therapeutic approaches requires great care towards the any possible adverse effects of therapy. Drug interaction is one of the issues related to drug safety which needs to be considered while prescribing any drug regimen to specific person. Any drug may react adversely with others drugs/foods/biological and other compounds which resulted loss of therapeutic efficacy, undesired effects and some severe complications; therefore medical system strongly recommended that concept of drug interaction must be applied during treatment process. This article summarizes traditional and modern perspective of drug interactions to explore issue for further research investigations.

KEYWORDS: Ayurveda, Medical, Interaction, Drug-Drug Interaction.

INTRODUCTION

Ayurveda emphasized towards safe treatment and cure diseases through it root causes with-out initiating another disease. Ayurveda describe various terms such as; *Vyapad*, *Viruddha*, *Ahita*, *Prakritiviruddha* and *Doshala* which are closely related to adverse combinations and somewhere also applied to “drug interaction”. However ayurveda also expressed the concept of incompatibility (*Viruddhaahara* and *aushada*) and guideline of some dietary restrictions while taking drugs as *Apathyasevana* in *Aushadaprayogakaala*. The problem of adverse effects associated with drug interactions increases day by day may be due to self medication and ignorance of concept of “drug interaction”.

Different causes of adverse drug reaction as per ayurveda

- *Viruddadravyaprayoga*
- *Vaidhyakruti*
- *Atimatradravyaprayoga*
- *Ahitatamadravyas*
- *Avastanusaradravyaprayoga*
- *Panchakarmavyapad*
- Improper use of *Rasaushadi*

Viruddadravyaprayoga (adverse drug interactions) is one of the important causes of adverse drug reaction as mentioned above. Therefore *Viruddadravyaprayoga*

needs special attentions towards the prevention of adverse drug reactions.

Need of Concept of Drug Interaction

- Ayurveda drugs sometimes not used as prescribed standard texts.
- Self medication sometimes may cause adverse drug interactions.
- Ayurvedic drugs may react adversely with allopathic medicines.
- Drug interaction may reduces/abolish desired effects of therapeutic agents.
- Drug interaction sometimes may have severe complications like; drug poisoning, internal bleeding, gastric trouble and hypo/hyper blood pressure.

Common type of interactions of natural drugs

- Herb-Herb interaction
- Herb-Food interaction
- Herb-animal origin drug interaction
- Idiosyncrasy
- Disease related interaction, etc.

Some herbs & their possible interactions

- *Aloe Vera (Kumari)* may interact with drugs which having blood-glucose-lowering properties. The absorption of vitamins also increases in the presence

of *Aloe Vera*. The prolong use of *Aloe* may increase actions of cardiac glycosides.

- *Ashwagandha* may affect digoxin and interfere with thyroid hormone.
- *Bala* interact with caffeine and may reduce the potency of anti-hypertensive drugs.
- Ephedrine may interact with steroids.
- *Boswellia* may interact with food stuffs.
- *Twak* may interfere with the conventional antidiabetic drugs.
- *Garlic* may interact with blood pressure drug like; lisinopril and may cause severe effects with drug like; warfarin or fluindione.
- *Guggulu* may reduce absorption of drugs like; diltiazem and propranolol.
- *Yashti Madhu* may decreases efficacy of antihypertensives drugs. It also interferes with the laxatives and corticosteroids. It also reduces absorption of iron and may enhance the potency of warfarin.
- *Pepper* interacts with many drugs and may enhances the levels of modern drugs such as; amoxicillin, barbiturates and NSAIDs.
- *Shatavari* offer additive effect with conventional antidiabetic drugs, may also affect absorption of other drugs (atovaquone, digoxin and ketoprofen), it

interact with estrogens and may enhance absorption of ciclosporin, dantrolene and paracetamol.

General interactions need to be avoided

Ayurveda provides guideline to minimize possible side effects by taking care of some guideline; which suggests time of drug administration, relationship of drugs with food, food which should be avoided with specific drug and drugs which should not be consumed together:

- *Amalki* should be avoided at bedtime to prevent any adverse effects on teeth.
- *Pippali* should be avoided in peptic ulcer disease and recommended with milk.
- *Tribhuvankirti* should be taken with *tulsi* juice, ginger or honey.
- *Terminalia Chebula* needs to be avoided in pregnancy.
- *Kakmachi* should be avoided with honey
- *Bhallataka* should not be consumed with hot water
- *Kampillaka* must not be consumed with buttermilk.
- *Garlic* contradicted with milk.
- Leaves of *asofoetida* should not be taken with honey.
- *Shilajatu* should not be consumed with *kakmachi*.
- Sesame seeds with black cumin not recomended.
- *Narikelataila* contraindicated with pork
- Equal quantity of *madhu* with *grutha* is contraindicated.

Table 1: Different examples of natural drug interactions.

S. No.	Interactions	Type
1	<i>Basella alba</i> along with <i>Sesamum indicum</i>	Herb-Herb interaction
2	<i>Mantha</i> with Milk	Herb-Food interaction
3	<i>Sarshapataila</i> contraindicated with <i>Kapotamamsa</i>	Herb-Animal origin drug interaction
4	<i>Guggulu</i> contraindicated with <i>Maithuna, Athapa</i> and <i>Krodha</i>	Drug-Activity (exercise) interaction
5	<i>Rasayana</i> contraindicated in <i>Alasi, Pramadi</i> and <i>Vyasani</i>	Drug-Disease interaction

Prakriti & dravyapravayoga

Human constitution considered as *prakriti* in ayurveda and the treatment approaches depends upon predominant constitution (*prakriti*) of an individual. Therefore therapeutic protocol differ person to person even for same diseases. The rate of drug absorption, metabolism and excretion changes as per varied *prakriti*; thus selection of drug and dose regimen play crucial role towards the safety issue of drug substances. Drug like semicarpus anacardium and ferula northex used in skin diseases but contraindicated in pitta constitution, similarly datura metel should not recommended in vata predominance.

CONCLUSION

Ayurveda suggested that the safety is prime issue regarding the use of natural drugs and physician must consider following aspect before prescribing any medicine: *prakriti*, *vaya*, *vikruti*, *satmya*, *saara*, *samhanana* and *bala*. Ayurveda also gives importance to time of drug administration (*Aushadasevanakaala*), drug adjuvant (*Anupaana*) and diet regimen (*Pathya-*

apathyasevana) to acquire optimum therapeutic effect and prevent any side effects of drug substances.

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