

Siddhar's personalised pre-treatment modality for Microbiomic Drug Resistance

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Abstract

Microbiomes are the microbiological environment of genetic material that resides within our body. They are beneficial to human beings in many ways which include host metabolism, nutrition and immune functions. The microbiomes help the human immune system in differentiating the beneficial and harmful micro-organisms, but in case of antibiotic drug administration, in order to safeguard themselves they exhibit resistance against those specific antibiotics. They also transmit the drug resistance to the human gene. To overcome this drug resistance Siddhars have found unique remedies namely *Viresanam*, *Vamanam* and *Nasiyam* and *anjanam* based on the basic principles of Siddha system of medicine. In this paper, we have briefly discussed the mechanism by which these three methods help in overcoming the ill effects caused by microbiomes.

Key words

Microbiomes, Siddha Medicine, *Viresanam*, *Vamanam*, *Nasiyaanjanam*.

Introduction

Each and every individual is having different types of drug resistance which remains as a challenge for the physicians as well as the Pharmaceuticals. So a personalized pre-treatment modality is the need of the hour to overcome this problem. *Viresanam*, *Vamanam* and *Nasiyaanjanam* are the major pre-treatment modalities found by Siddhars, through which they came over the consequences of drug resistance. The Siddha literatures have mentioned about the three humours (*Vaadham*, *Pitham*, *kabham*) in our body. Every man is specific in his own way with different humours dominating in his body. Based on the predominance of the humours present in the living body, the pre-treatment and treatment are done by our Siddhars which are mentioned in the age old Siddha literatures. They have chosen the methods of *Viresanam*, *Vamanam* and *Nasiyaanjanam* to regulate the humours and hence the drugabsorption is made faster. Personalised medicine is getting popular nowadays. Everyone wishes to get a personalized medicine which is suitable for their own physiology. In this scenario Siddhars' personalized pre-treatment modalities will be more preferable. One of the significant properties of these pre-treatment modalities is that it clears the microbiomes which cause drug resistance, as the degree of drug resistance is a variable among the individuals.

Microbiomes

Microbiome is the ecological community of commensals, symbiotic and pathogenic micro organisms that literally share our body space. It is the collection of genes of microorganisms that live within the human body. Their major site of living is gut flora. Other sites include skin, mammary glands, seminal fluids, saliva, respiratory tract etc. Microbiomes include bacteria, virus, archaea, fungi, protists. It occupies about 75% of our body space. Among these 75%, majority of the microbiomes are present in gut flora.

Significance and consequences

The human intestine is incapable in absorbing and digesting dietary fibre contents; the microbiomes help us in fermenting these fibres and makes it ready for digestion and absorption.

To overcome the external factors that are unfavourable for the survival of these organisms, they have gradually developed resistance against those factors. Our own genes will get adapted to these microbiomes and hence our genes will exhibit high drug resistance.

Due to which drug will show no action against the diseases. The excess microbiomes should be released from the gut, so that the action of drug will be more effective.

Solution in Siddha Medicine

Siddhars too faced the same problem of drug resistance especially in some individuals who exhibited the variations of excessive humours which are *vaadha*, *pitha* and *kabha Kutrās* (Defective metabolism leading to the accumulation of wastes). They have identified various methods to eliminate waste particles from different systems of the body. Though they used these methods as a starter for treatment, they observed better prognosis by this pre-treatment modality itself.

Pre-treatment modalities:

The pre-treatment modalities for clearing the waste from various systems of the body include:

- *Viresanam* (Purgation) - To reduce excessive *vaadham*
- *Vamanam* (Vomiting) - To reduce excessive *pitham*
- *Nasiyam* (Nasal administration) - To reduce excessive *Kabham*

Mukkuṭrangal (Three humours) and Microbiomic drug resistance:

To understand the mechanism of action of these methods against microbiomes, it becomes mandatory to have knowledge on *mukkuṭrangal* (Three humours), especially their physiological functions and pathological variations. The three humours include *Vaadham* (Dry cold), *Pitham* (Heat) and *Kabham* (Wet Cold) present in the body.

- *Vaadham*
 - Composition : *Vin* (Space) + *Vali* (air)
 - Nature : Dry cold
 - Action : *Ookkamundaakal* (Stimulant), *Asaithal* (Motion inducing), *MalamVelipadal* (Waste expeller).

Physiologically *Vaadham* plays a major role in excretion of metabolic wastes through ano-rectal route, but excessive accumulation of *vaadham* leads to *malakkattu* (Constipation). This accumulation of waste products leads to excessive productivity of micro organisms resulting in increased drug resistance.

- *Pitham*

- Composition : *Thee* (Fire)
- Nature : Heat
- Action : *Seripithal* (Digestion inducing), *Pasiundaakal* (Appetizer).

Pitham is mainly responsible for proper digestion, however increase in *pitham* may lead to *pasi thee kedadaithal*(Impairment in digestion), which results in the accumulation of indigested bolus. This remains as a suitable environment for the growth of Micro-organisms finally leading to increased drug resistance.

- *Kabham*

- Composition : *Man* (Soil) + *Neer* (Water)
- Nature : Wet cold.
- Action : *Neippukaathal* (Maintaining the moisture in the body).

Physiologically *Kabham* acts as a moisturizer in our body and also maintains equilibrium with *vaadham* and *Pitham*. The excessive *kabhamis* expelled through the excretion of mucus. If not expelled properly, the accumulation of mucus may result in the excessive productivity of microorganisms which leads to drug resistance.

Treatment modalities

Viresanam

Viresanam is the mechanical expulsion of excessive accumulated *vaadham* (air) through suitable drugs by which the excessive *vaadham* is completely washed out and maintained at a proper level. The excessive accumulation of waste products is completely washed out by *Viresanam*. Here the microorganisms are also washed out along with the metabolic waste products. Since GUT flora is the main site of living of microbiomes, through *viresanam*, microbiomes are almost eliminated away. By which the drug resistance could also be inhibited. When the treatment is started after this method, fast and ready drug absorption could be noted. And there could be a better and noticeable prognosis.

Vamanam

Vamanam is the evacuation of the Upper Gastro Intestinal Tract through the process of inducing vomit. When the indigested bolus gets dumped up in the upper GIT, *pitham* is increased automatically. This serves as a support for the growth of abundant microorganisms

which may resist the drugs. So, by giving *vamanam* (vomit), upper GIT is free off from accumulated waste along which the microbiomes are also expelled out. Therefore there would be easier drug absorption during treatment. A good degree of prognosis will also be exhibited Here, the excessive heat is expelled out through which excessive *pitham* is reduced and maintained at a proper level.

Nasiyam and anjanam

Nasiyam is the evacuation of Respiratory tract through the administration of nasal drops. Here the excessive cold (mucus) is expelled out. Through which the excessive *kabham* is reduced and maintained at a proper level. Obviously there is an expulsion of microbiomes along with the mechanically released *kabham*. So, drug resistance will be a barrier in treatment and thus drug absorption will be effective.

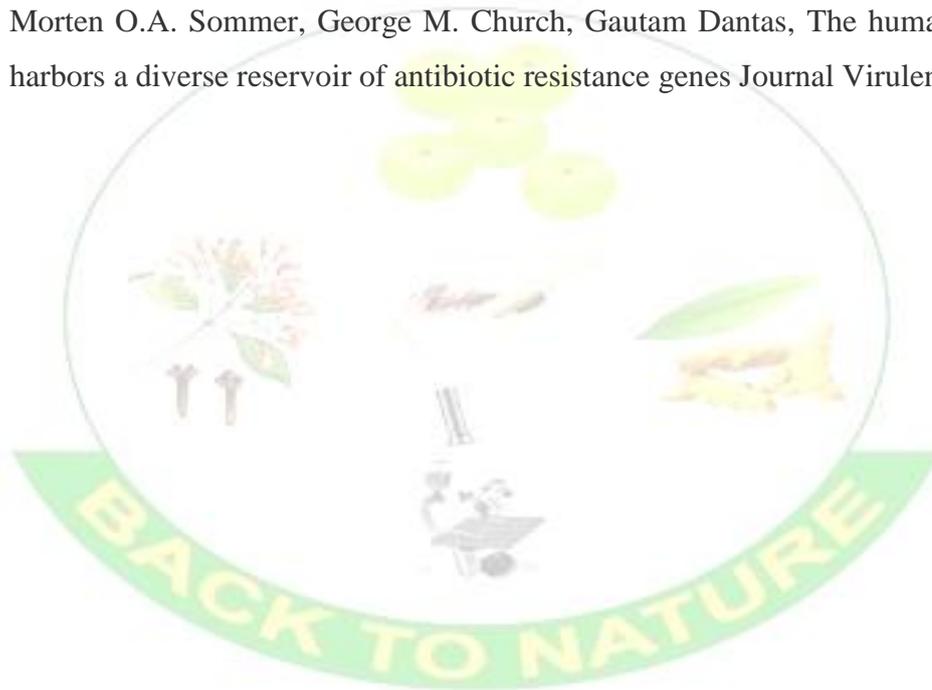
Conclusion

From this paper it is clear that due to microbiomes, the degree of drug absorption varies from individuals to individual. The *Viresanam*, *Vamanam* and *Nasiyaanjanam* serves as a better solution for this problem. Moreover the three humours are regulated and hence the drug absorption will be easier. This is an initial work; further works are to be carried out in this area in order to make a disease free world.

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