

METHOD OF ORAL FOOD CHALLENGE FOR THE ASSESSMENT OF FOOD ALLERGIES IN RELEVANCE WITH AYURVEDIC CONCEPT OF MATRA VIRUDDHA AHAR

Dr. Ditikshakumari Chaudhari*, Dr. Dilip Jani**, Dr. Janki Lukhi*** and Dr. Kinjal Unadkat****

*PG Scholar, Upgraded PG Dept. of Dravyaguna, Govt. Ayurved College, Vadodara, Gujarat, India.

**H.O.D. and Professor, Upgraded PG Dept. of Dravyaguna, Govt. Ayurved College, Vadodara, Gujarat, India.

***Assistant Professor, PG Dept. of Dravyaguna, JS Ayurveda Mahavidhyalay, Nadiad.

****PG Scholar, Upgraded PG Dept. of Dravyaguna, Govt. Ayurved College, Vadodara, Gujarat, India.

Article Received on
21 July 2020,

Revised on 11 August 2020,
Accepted on 01 Sept. 2020,

DOI: 10.20959/wjpr202010-18693

*Corresponding Author

Dr. Ditikshakumari

Chaudhari

PG Scholar, Upgraded PG
Dept. of Dravyaguna, Govt.
Ayurved College, Vadodara,
Gujarat, India.

ABSTRACT

Ahar, Nidra, Brahmacharya are three *Upastambha* describe in *Ayurved*. Among all of them *Ahar* is the first and foremost need for living a healthy life. *Ahar* is responsible for both health and diseases. Diseases are caused by the incompatible food. *Viruddha Ahar* can act as '*Dhatupratyanik*' means it hampers the metabolism of tissue and hinder the process of formation of tissue. *Viruddha Ahar* can be correlated with the food allergies. Oral food challenge method is useful for the accurate assessment of food allergy. This method can also be useful for the assessment of *Matra Viruddha Ahar*.

KEYWORDS: Incompatible food, *Matra Viruddha Ahar*, Oral food challenge.

Abbreviations: OFC- Oral Food Challenge, SPT - Skin prick test.

INTRODUCTION

Arogya is dependent on compatible food, while incompatible food cause diseases. Description of incompatible food or *Viruddha Ahar* is a unique contribution given by *Ayurved* as a preventive aspect.

The food which dislodge the *Doshas* from their normal site, but do not expel it out from the body, which are considered as *Viruddha* or incompatible food. The food which is wrong in combination, consumed in incorrect dose, wrongly prepared, consume at inappropriate time etc. can lead to *Viruddha Ahar*.^[1]

Various types of *Viruddha Ahar* has been explained in *Ayurvedic samhitas* among them *Matra Viruddha Ahar* plays an important role. *Matra* means measure of something like quantity, size, number, degree, amount, weigh etc. Person should always consume food in proper quantity. quantity of food depends upon the strength of digestive fire.^[2] Not only *Agni* but factors like *Vaya*, *Dravya*, *Desh*, *Kala*, *Bala*, *Dosha* etc also responsible for *Ahar Matra*.

In today's busy life, rules regarding diet and regimen have been compromised, which is showing the diminishing status of health. *Viruddha Ahar* can be correlated with the food allergies. Food allergy is an unpleasant or dangerous immune reaction after intake of certain food. In today's era, people blindly follow the wrong food in improper quantity, which can cause so many diseases like skin allergy, digestive problems or even a life-threatening reaction known as anaphylaxis.

So, it is very essential to know that which particular food, in which quantity - is harmful for that particular individual. For that Oral food challenges are the gold standard for diagnosing the food allergies. This method of OFC is highly accurate diagnostic test.

The present article narrates the *Ayurvedic* as well as modern perspective of *Matra Viruddha Ahar*.

MATERIAL AND METHODS

The material for this article in view of *Matra Viruddha Ahar* and OFC method for the assessment of allergenic food, were collected from classical *Ayurvedic* texts and research articles for concerned subjects.

MODE OF ACTION OF MATRA VIRUDDHA AHAR AND FOOD ALLERGY

Mode of action of <i>Matra Viruddha Ahar</i>	Mode of action of food allergy ^[4]
-Consumption of improper quantity of food -Sudden vitiation of the <i>Tridosha</i> at a time -Leads to indigestion and vitiation of food material -Blocking the movement of food	-Consumption of the allergenic food protein -Stimulates production of IgE antibodies specific to that food -Which then bind to FCER1A receptors on the surface of tissue mast cells and blood

produce diseases. ^[3]	basophils.
-Inadequate quantity of food -Not help in improvement of strength, growth and vigour. -Becomes a cause for all types of diseases of <i>Vata</i> origin. -Excess quantity on the other hand produces quick increase of all the <i>Doshas</i> . ^[3]	-They bind to their specific IgE antibodies and trigger the release of mediators, such as histamine and prostaglandins. -Cause Allergic symptoms.

On the basis of above info if *Viruddha Ahar* consume in improper quantity or consume quantitative incompatible food can lead to vitiation of *Doshas* and provoked the symptoms of food allergy.

MATRA VIRUDDHA AHAR

Definition of *Matra*: Quantity of food consumed which gets digested without creating disturbances in the normalcy of the body and within the stipulated time, that should be considered as the proper quantity.^[5]

Definition of *Viruddha Ahar*: All kind of foods which aggravate the *Doshas* but do not expel them out of the body, all of them become unhealthy.^[6]

Example: *Matra Viruddha Ahar* is mixture of equal quantities of honey and ghee.^[7]

So, if the consuming food is in the wrong quantity or a food which is prepared by mixing two or more substances in improper quantity, whichever, that cause harmful effect to the body like food allergies, that can be consider as *Matra Viruddha Ahar*. Oral food challenge can be a one of the important method to assess the effects of *Matra Viruddha Ahar* and as to decide the threshold level of dose for that particular food.

ORAL FOOD CHALLENGE

An oral food challenge is a diagnostic test for food allergies. An allergist is not able to reach at a definite diagnosis, even after performing SPT and blood tests, In this type of case, patient may be suggested for an oral food challenge. OFC is conducted by skilled and trained staff who continuously interacts with the patient and present throughout the procedure. The oral food challenge remains the most reliable procedure to confirm or exclude food allergy.^[8]

The general methodology for this test is to administer the suspected food in gradually increasing doses under a medical setting and will be observed carefully. It has three types.^[9]

- 1) An open-food challenge test: In this type of test patient can recognize the target food without blinding. This may be appropriate for infants or young children, because psychological claims of symptoms are negligible at these ages. However, only subjective symptoms, particularly when the patient displays anxiety about the challenge, interpreting the result is difficult. The results can be definitive if the challenge, either negative results or positive results with objective symptoms.
- 2) A single-blind food challenge: In this type patient does not know whether the food contains the suspected allergen or not, but the observer knows. A masking effect sometimes helps to reduce psychological effects or anxiety or difficulty of eating in small children.
- 3) A double blind placebo controlled food challenge (DBPCFC): In this test both the patient and observer are blinded to the food challenge material, remains the gold standard for diagnosing food allergy for both clinical and scientific purposes.

RESULTS

If an oral food challenge test results are in no symptoms, then food allergy can be ruled out. If the challenge results are in symptoms and these symptoms are consistent with your medical history and laboratory tests, then a diagnosis of food allergy is confirmed.

Importance

- 1.) Carried out for the purpose of diagnosis of food allergy.^[9]
- 2.) Threshold level of food.^[10]

SIGN AND SYMPTOMS OBSERVED IN THE METHOD OF ORAL FOOD CHALLENGE CAN BE CORRELATE WITH THE DISEASES WHICH ARE PRODUCED BY INTAKE OF *VIRUDDHA AHAR*

Diseases due to <i>Viruddha Ahar</i> ^[11]	Related Sign and symptoms observed due to food allergy in OFC ^[9]
Skin :- Erysipelas, small pox, leukoderma, leprosy, oedema	Pruritus, erythema, urticaria, angioedema
Oral :- Pain of the throat	Throat pain, itching of palate, tongue or lips, palatal redness or hives
Eye :- Blindness	Eye swelling, tears, conjunctivitis
Upper respiratory tract:- Rhinitis	Rhinorrhoea, sneezing, and nasal obstruction
Gastrointestinal tract :-	Nausea, vomiting, diarrhoea, abdominal

Ascites, fistula in ano, flatulence, amavisha (endogenous toxins), Duodenal disease, hyperacidity	pain or cramp
Cardiovascular :- Fainting	Hypotension, light-headedness, cold extremities, cyanosis, syncope, collapse
Neurological :- Insanity, fainting	Behavioural change, loss of activity, restlessness, dizziness, sleep

On the basis of above classification, it can be understood that the sign and symptoms that found due to food allergy they can be correlated with the *Viruddh Ahar* like skin problems, throat pain, rhinitis etc. found in both conditions. Nausea, diarrhoea, vomiting is seen in food allergy, while in *Viruddha Ahar* due to *Amavisha* these symptoms can be observed. So, both food allergy and *Viruddha Ahar* can be correlated. So, the method of OFC applied for food allergy can be also applied for the assessment of *Viruddha Ahar*. But in today's era people are consuming food which are in improper proportion or quantity. Which is harmful for the people knowingly or unknowingly. So, it is a prime need of an hour to get a wide data about *Matra Viruddha Ahar* consumption and its effects. For that this OFC method can be a gold standard if applied in *Matra Viruddha Ahar*. The general methodology for this test is to administer the suspected food in gradually increasing doses under a medical setting and will be observed carefully. It has three types. For that *Matra Viruddha Ahar* should administer in gradually increasing doses under medical setting and should be observed carefully and obtain results should be analysed.

TREATMENT :-	
As per Ayurved	Based on results of the OFC^[9]
Purgation (<i>Virechan</i>), emesis (<i>Vaman</i>) and palliatives (<i>Shaman</i>) and constant use of healthy foods will cure all diseases arising from incompatible foods. ^[12] eliminate the vitiated <i>Doshas</i> with emesis, purgation and other <i>sodhan</i> therapies. Treat the complications by administering the drugs having opposite qualities. ^[13]	Most skin and mucosal symptoms – antihistamines mild respiratory symptoms - Beta-agonist inhalation symptoms increase - first-line of treatment - Intramuscular adrenaline (0.01 mg/kg) additional treatments such as intravenous fluid, parenteral antihistamine or corticosteroids should be applied.
DIET MANAGEMENT :-	
As per Ayurved	Based on results of the OFC^[9]
Incompatible or unwholesome food which have become accustomed by long use should be discontinued by quarter and quarter gradually, same way wholesome diet should be adopt gradually with intervals of one, two or three days. ^[13] <i>Guru ahar</i> should be taken half of the capacity of the individual and <i>laghu ahar</i>	depend on the total dose and symptoms found in the OFC, patients should be advised about restrictions of the food. Even after a negative challenge, the amount of food intake at home consume by patient may not exceed that of the total dose which is consumed at least several times to confirm safety, so that particular food is not going to do any harmful

also should not be taken to his full satisfaction. ^[14]	effect. Positive challenge is not always suggesting a complete elimination of the food. Patients may take small amounts of the target food within proper safety range.
--	---

Whenever OFC is applied in *Matra Viruddha Ahar* and due to that if aggravated *Dosha* are in small quantity then can go for *Shaman Chikitsa* or can give antihistamines, if the aggravated *Dosha* are more, then adrenaline or *Shodhan Chikitsa* can be given. In negative food challenge person can consume that food. In positive challenge that particular food should be discontinued gradually or if can't completely eliminate that food then can consume within appropriate safety range which is known by the OFC.

MERITS AND DEMERITS IF OFC APPLIED IN MATRA VIRUDDHA AHAR

Merits

1. To decide the threshold level of incompatible food.
2. To know - Which particular food in which dose harmful for that particular individual.
3. To decide the safety range for different kind of *Matra Viruddha Ahar*.

Demerits

1. Among all wide varieties of food Hard to detect which are the food combinations in which proportion is harmful.
2. It took lots of time to study.

DISCUSSION AND CONCLUSION

Matra Viruddha Ahar is not just about the honey and ghee taking in equal quantity, it is a wide concept about the proportion of food and its synergetic action with each other as well as the consumption of total quantity of food. Intake of incompatible food is increasing day by day and unknowingly to the patient it causes deleterious effects on health, but unfortunately, we don't have much data to evaluate the *Matra Viruddha Ahar*. So, the main aim of this study is that we can compile the data which shows even the merest changes that happens in body at every stages of food consumption in different quantities. Either it may be a quantity of single food or it may be the food which is prepared with the incorrect quantity of stuffs.

In short, this OFC diagnostic method of food allergy if applied in the *Matra Viruddha Ahar* then we can crack the mystery that how quantitative incompatibility can be harmful for different individuals.

REFERENCES

1. Agnivesh, Charaka, Dridhbala, Charakasamhita, Sutrasthana 26/81, with commentary of chakrapani datta, Translated by prof. K.R. Srikantha Murthy, Reprint, Chaukhambha orientalia, Varansi, 2017, pg 413.
2. Agnivesh, Charaka, Dridhbala, Charakasamhita, Sutrasthana 5/3, with commentary of chakrapani datta, Translated by prof. K.R. Srikantha Murthy, Reprint, Chaukhambha orientalia, Varansi, 2017, pg 91.
3. Vagbhat, Ashtangahridaya, Sutrasthana 8/4,3, by Dr. R. Vidyanath, Chaukhamba Surbharati Prakashan, Varansi, 2016, pg 155.
4. Susan Wasserman, Wade Watson, Food allergy. All Asth Clin Immun, 2011; 7: S7. doi:10.1186/1710-1492-7-S1-S7. <https://doi.org/10.1186/1710-1492-7-S1-S7>
5. Agnivesh, Charaka, Dridhbala, Charakasamhita, Sutrasthana 5/4, with commentary of chakrapani datta, Translated by prof. K.R. Srikantha Murthy, Reprint, Chaukhambha orientalia, Varansi, 2017, pg 92.
6. Agnivesh, Charaka, Dridhbala, Charakasamhita, Sutrasthana 26/85, with commentary of chakrapani datta, Translated by prof. K.R. Srikantha Murthy, Reprint, Chaukhambha orientalia, Varansi, 2017, pg 417.
7. Agnivesh, Charaka, Dridhbala, Charakasamhita, Sutrasthana 26/90, with commentary of chakrapani datta, Translated by prof. K.R. Srikantha Murthy, Reprint, Chaukhambha orientalia, Varansi, 2017, pg 417.
8. Barbara K. Ballmer and Kirsten Beyer, Food challenges, the journal of allergy and clinical immunology, July 27, 2017, J Allergy Clin Immunol, 2018; 141: 69-71. <http://dx.doi.org/10.1016/j.jaci.2017.06.038>
9. Komei Ito, Atsuo Urisu, Diagnosis of Food Allergy Based on Oral Food Challenge Test, Allergology International, 2009; 58: 467-474.
10. Morten osterballe, Carsten bindslev-jensen, Threshold levels in food challenge and specific IgE in patients with egg allergy: Is there a relationship? J Allergy Clin Immunol April 16, 2003, 0091-6749/2003.
11. Agnivesh, Charaka, Dridhbala, Charakasamhita, Sutrasthana 26/102-103, with commentary of chakrapani datta, Translated by prof. K.R. Srikantha Murthy, Reprint, Chaukhambha orientalia, Varansi, 2017, pg 419.
12. Agnivesh, Charaka, Dridhbala, Charakasamhita, Sutrasthana 26/104, with commentary of chakrapani datta, Translated by prof. K.R. Srikantha Murthy, Reprint, Chaukhambha orientalia, Varansi, 2017, pg 419.

13. Vagbhat, Ashtangahridaya, Sutrasthana 7/46,48, by Dr. R. Vidyanath, Chaukhamba Surbharati Prakashan, Varansi, 2016, pg 146.
14. Vagbhat, Ashtangahridaya, Sutrasthana 8/2, by Dr. R. Vidyanath, Chaukhamba Surbharati Prakashan, Varansi, 2016, pg 154.