



“A Scientific Review On Aayurveda Aahar Dravya In The Management Of Hypothyroid Disease”.

Dr. Varsharani Arjun Chaudhari.

PhD. Scholar. Shree Saptashruni Aayurved Mahavidyala Nashik.

Hod. Asso.Prof. Department Of Kayachikitsa.

Smbt Ayurved College And Hospital, Dhamangoan, Nashik.

Guide Name- Dr. Popat V. Jagtap.

Professor, Department Of Kayachikitsa.

Shree Saptashruni Aayurved Mahavidyala Nashik.

Dr. Santosh Ramdas Niphade

PhD. Scholar, Sion Aayurveda Mahavidyalaya Shiv, Mumbai.

Asst. Prof. Department of Rasashastra and Bhaishajya Kalpana

Smbt Ayurved College and Hospital, Dhamangoan, Nashik.

Abstract:- Hypothyroid is the disease of Thyroid gland. Out of a three types of Hypothyroidism, Primary hypothyroid is the state of deficiency of thyroid hormone T_3 and T_4 and elevation of serum TSH levels. Prevalence of Hypothyroidism in India is 11%. Researchers has found association between different lifestyle factors and the incidence of different thyroid diseases; diet is one of them. Though the exact disease condition with any special name is not described in Ayurveda which is similar to Hypothyroidism; it can be correlated with Galgand, the eight types of Nindit purushas, Kaphavatavrudhhi, and Santarpan Janit Vyadhi. “Rukshanna, Vataghna, Sheshmedohar Anna Sevan” is indicated to deal with such conditions. This type of Aahar dravyas/food articles are chosen from Shook, Shami, Shak, Phal, Mansa, Goras, Harit, Jal and Aahar Yoni Vargas. The different Aahar kalpana can be used in Hypothyroid are Manda, Peya, Yusha, Vilepi and Kulmasha. The detailed description about Aahar Dravya and Aahar Kalpana with its mode of action in Hypothyroid disease will be explained in full paper.

Keywords:- Hypothyroid, Galganda, Apatarpana, Aahar Dravya and Aahar kalpana.

Introduction-

Thyroid gland is a major functioning gland of human endocrine system and it plays vital role in the metabolism, growth and development. The burden of thyroid disorder in the general population is enormous and increasing day by day in India.⁽¹⁾ Out of a distinguishable thyroid disorders, Hypothyroid is most common. Hypothyroid is classified as Primary, Secondary and Tertiary hypothyroidism. Primary is due to deficiency of thyroid hormone T₃ and T₄; Secondary is due to the deficiency of TSH; where tertiary is due to thyrotropin releasing hormone deficiency. Secondary and tertiary hypothyroidism also called as central hypothyroidism is rare and account for less than 1% of cases.⁽²⁾ For this article we are taking a review of literature only for Primary hypothyroidism and Aayurved Aahar.

Iodine deficiency and autoimmunity are the two main causes of Hypothyroidism. In autoimmune hypothyroid immune system attacks on thyroid gland to produce thyroid auto antibodies, which destroy the thyroid gland. In such conditions thyroid gland become unable to produce enough hormone for daily needs.

National family health survey shows that there is no state in India which is free from Iodine deficiency disorder- IDD. To overcome this situation the government of India in 2015; universal salt iodization was made compulsory throughout the country⁽³⁾. Still the number of cases are increasing day by day. According to the report of Times of India in May 2012 the health experts are to be believed that the sedentary lifestyle sans physical activity coupled with imbalanced dietary make up is pushing more people including youngsters towards Hypothyroidism⁽⁴⁾. Researchers has found association between different lifestyle factors and the incidence of different thyroid diseases.⁽⁵⁾ So the diet plays important role in the formation of hypothyroid disease. The both cases of the primary hypothyroidism referred as a state of low thyroid hormone T₃ and T₄ with elevated value of TSH. Prevalence of Hypothyroidism in India is 11%, compared with only 2% in the U.K. and 4.6 % in the USA. Compared with coastal cities (e.g. Mumbai,Goa and Chennai) Cities located inland (e.g Kolkata, Delhi, Ahemadabad, Banglore and Hyderabad) have a higher prevalence.(11.7 %)⁽⁶⁾

Symptoms of hypothyroidism are Dry skin, dry and brittle hair with hair loss, facial puffiness, change in voice, constipation, dysphagia, loss of appetite, weight gain, cold intolerance, lethargy, decreased attention span etc. If we try to find out the pathogenesis, clinical presentation of hypothyroidism according to the principles of Ayurveda, we find that the disease is basically caused due to the dysfunction of Agni. Hypo function of the Jatharagni leads to the hypo function of Rasa & Medo Dhatvagni. Kapha and Vata Dosha also gets vitiated and results in disease formation. Though the exact disease condition with any special name is not described in Ayurveda which is similar to Hypothyroidism yet, several references are scattered in various Ayurveda texts. On the basis of these references, we can correlate and described the condition of Hypothyroid with Galgand, the eight types of Nindit Purushas, Kaphavatavrudhhi, and Santarpan Janit Vyadhi. All these insights have to be kept in mind when we look for the Ayurveda Aahar and treatment for such type of diseases. Here We are dealing with the “Aayurveda Aahar Dravyas and their different Kalpana” only.

Aim:- To review Aayurveda literature for Dietary regimen-Aahar Dravyas and their different Kalpana in Hypothyroid disease.

Objectives:-

- 1) To study and understand the modern and Ayurvedic concepts of hypothyroidism.
- 2) To understand the pathology of primary hypothyroid in perspective of Ayurveda view considering the involvement of dosha- dushya –strotasa and their vitiation.
- 3) To find the possible principle of Diet application/ Aahar Dravyas and different Kalpana for primary hypothyroidism by reviewing Ayurveda literature.

Material & Methods:- Classical text books of Ayurveda, Modern textbooks and research work available related to topic from authentic sources of internet.

- 4) Charak Samhita
- 5) Sushruta Samhita
- 6) Ashtanghridaya Samhita
- 7) Sharangdhara Samhita.
- 8) Madhav Nidana
- 9) Yogratnakara
- 10) API text book of Medicine.
- 11) Scholarly articles from authentic sources of internet .

Observation & Discussion:-

1] Hypothyroidism:- The Primary Hypothyroidism is defined as decrease in the serum T_3 , T_4 and increase in the serum TSH levels with respect to normal reference range. Decreased thyroid hormones can lead to decreased basic metabolic rate and insufficient energy supply to human body resulting in the formation of Hypothyroidism.

- I. Epidemiology-** Now a days SCH is becoming more common in both developed and developing countries. Statistical research demonstrates a higher incidence of Hypothyroid in women and increases in men with advance age.
- II. Etiopathogenesis:-** Iodine deficiency and Autoimmunity are the major causes. In both cases thyroid gland produces less amount of a free thyroxine hormones. To compensate the deficient thyroid hormone body tends to produce the excess Thyroid Stimulating Hormone .So the deficiency of T_3, T_4 and increase in TSH results in to Hypothyroidism.
- III. Clinical Manifestation:-** Tiredness, weakness, lethargy, Dry Skin n hair, Feeling of cold or cold intolerance, Hair loss, Difficulty in concentration and poor memory, Weight gain with poor appetite, Constipation, Dyspnea, Hoarseness of Voice, Menorrhagia, Parasthesia, Impaired hearing.
Signs- Dry course and pale skin, Cool peripheral extremities, Puffy face, hands and feet, Diffuse alopecia, Bradycardia, Peripheral oedema.
- IV. Diagnosis:-** Based on serological investigations.
Total free T_4 levels less than normal values (Total Free $T_4 = 0.7-1.24ng/dl$).
Patients having Serum TSH level above normal values (S.TSH= 0.34- 4.25 ul/ml.)
- V. Treatment:-** The primary goal of starting treatment in SCH is to normalize the TSH levels. The starting of Levothyroxine with 1.6 mcg/kg. Every 6 month follow up of TSH is taken and if needed changes will be made in the doses of treatment.

2] Ayurveda aspect of a Hypothyroidism:- The exact correlation of disease with a Specific name is not exactly mentioned in Ayurveda texts. When we correlate following conditions with Hypothyroidism.

- I. Galganda⁽⁷⁾-** Aacharya Charaka has mentioned the Galganda Vyadhi in 20 Vyadhies of a Kapha Nanatmaj Vikaras. Vitiated Kapha Dosha get accumulated at the site of neck region and gradually develops protuberance called Galganda.

- II. Kaphavatvrudhhi with Pittakshya**⁽⁸⁾- Increased kapha with Vata dosha and decreased Pitta Dosha results in the formation of Shaitya, Stambha, Gaourav, Agnimandya, Gatraparushya which resemble with the symptoms of SCH like Cold intolerance, Muscle weakness, Lethargy, Anorexia, Dry Skin & hair.
- III. Sthaulya**⁽⁹⁾- One of a symptom of a SCH is weight gain. Ayurveda has described the Shoulya Vyadhi under Eight Nindit Purushas in which excess Meda & Mansa Dhatus are accumulated in body resulting in weight gain.
- IV. Santarpanjanit Vyadhi**⁽¹⁰⁾-Aachrya Vagbhata has included Kanthagat rogas as an indication for Langhana treatment⁽¹¹⁾.Langhana is a treatment of a Santarpanjanit Vydhies.

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- V. Agnimandya Janit Kaphvataj Aam Pradhan Vyadhi**⁽¹²⁾- Jathargni is responsible for the Aayu, Varna, Bal, Swasthya, Utsaha, Oja, Teja, Dhatvagni and Pran of a human being. The distortion of Jatharagni causes different diseases. Aahar is responsible for the proper functioning of Jatharagni. Kaphakara aahar causes Agnimandya. Due to Jatharagnimandya Sam aahar-rasa is formed. This Sam Aahar-rasa is carried throughout the body by Vata. Sam aahar –rasa causes Strotorodha. It hampers the formation of further Dhatus upto Oja. Sam Rasa and distorted Mansa, Meda Dhatus are formed. Distorted Mansa Meda Dhatu causes the diseases like Gandmala, Arbuda, Granthi & Galganda⁽¹³⁾.
- VI.** From the above Ayurveda literature search we can conclude that the entity of **Hypothyroidism is not limited to Galganda only**. As Galgand refer to a local disease at neck region and Hypothyroid is a **broad entity of metabolic disorder**. Galganda can be present as a one of symptom in Hypothyroid in the form of Goiter. Likewise Galganda, it's hard to limit Hypothyroid up to formation of Sthulya only. It is also one of a symptom present in Hypothyroidism in the form of weight gain. Thus we can conclude that the Hypothyroid is a broad spectrum, Strotorodh pradhan systemic disease causes due to Agnimandya and increased KaphaVata dosha.

3] Possible principle of use of Aahar kalpana in Hypothyroidism:-

- I. Importance of Aahar-** Aahar is responsible for the once origin and dissemination. The growth of human body, Bal/strength, Varna/luster and Aarogya/health is dependent on Aahar. Dissimilitude Aahar/food causes the diseases. So Healthy and Unhealthy both states are dependent on the consumption of Aahar^(14 Shu.Su.46/3).
- II. Principle of Aahar kalpana In Hypothyroid Disease-** From the above literature search, we can say that the Agnimandya, formation of Aam, Aamjanit strotorodh and vitiation of Kapha-Vata Doshas are the pathological factors involving in the formation of Hypothyroidism. And basic cause of all these factors are usually Santarpan⁽¹⁵⁾. Treatment for the Santarpanjanit Vdyadhi is Apatarpan^(16,17). Various

modalities has explained to treat these conditions, but when we think about Aahar the Rukshanna⁽¹⁸⁾, Vataghna, Sheshmedohar Anna Sevan is indicated⁽¹⁹⁾.

Also we can not forget about the vitiation of Vata along with kaha Dosha in Hypothyroid. So the food which decreases Jatharagni mandya, Datvangi mandya, relives Strotorosh and Aam, decreases kapha without vitiation of Vata will be suitable in Hypothyroid.

4] Aahariya Dravyas In Hypothyroid Disease- Here we have collected some dietary food substances and there Kalpanas from Aayurveda texts which can be eaten in Hypothyroid and may help to prevention, breakdown of pathogenesis and maintenance of disease state. **Only Pathyakar or which Dravyas are suitable & can be useful is considered here. Apathy or unsuitable are not considered here.**

Table No.01⁽²⁰⁾

Group of Food Substance/Aahar Varga	Name of Food Substance/Name of Aahariy Dravya	Properties of Food Substance/ Gun Karma of Aahariy dravya
Jalvarga (Ch.Su.27) (Shu.Su.45),(Ash.Su.5)	Ushna Jala	Dipan, Pachan, Laghu, Vatkhanashak, Kanthya(Useful in Kantha Roga)
Shookdhanya Varga(Ch.Su.27) Or Shali Varga (Shu.Su.46) (Grains)	Rakta Shali (Type of a rice)	Shit, Tridosahar, Svarya, Mutral
	Shashtik Shali(Type of Rice)	Shit, Snhigdha, Guru, Tridoshagna.
Kudhanya Varga (Shu.Su.46) or Shookdhanya Varga(Ch.Su.27)	Yava (Barley)	Ruksha, Shit, Aguru/non heavy, Prabhut Malakrut, Kaphavikarnut, Shulvilekhanchahach.
	Venuyava/ Barley- shaped seeds of Bamboo	Ruksha,Ushna, Kapha-pitta and Medohar.
Shamidhanya Varga(Lentils) (Ch.Su.27) Shamidhanya Varga (Shu.Su.46)	Masoor (Lentil)	Guru,Sangrahi, Ruksha, Badhvarchas.
	Makushtha(Type of a peas)	Ruksha, Shit,Grahi, Kaphahar
	Chanak/Aadhaki/Tur (Pigeon Peas)	Kapha-vatahara, Shit,Ruksha.
	Kalay(Vatana)(Peas)	Ruksha Shit, Vatakar can be taken with Sneha/ Ghee or oil.

Mamsa Varga(Meat) (Ch.Su.27) (Shu.Su.46)	Lava(Common quail)	Laghu,grahi,Agnidipak, Kaphavikarhar
	Tittir(Partridge)	Laghu,Ushan, Agnivardhan, Tridoshahra.
	Kukkut(Cock)	Ushna, Swedakar, Ashinghda, Vatahar.
	Kapot(Pigeon)	Kashay, Vishad/non slimy, Laghu
	Shash (Hare)	Kashay,Vishad, Ruksha,Shit, Laghu, Useful in Vatapradhan sannipata.
	Shuk (Parrot)	Kashay, Amla, laghu, Agnivardhak.
Shak Varga(Vegetables) (Ch.Su.27) (Shu.Su.46)	Kalay Shak(Green peas leaves)	Laghu,Ruksha,Ushna.
	Tanduliyak(Amaranth leaves)	Ruksha,Madhurpaki.
	Palankya(Spinach)	Guru, Ruksha, Malbhedan/purgative
	Vartak(Bringal) Uses fruit	Tikta, Rochan, Laghu, Agnidipak, Kaphavatahar.
	Karvellak (Bitter gourde)	Tikta, Rochan, Laghu, Agnidipak, Kaphavatahar.
Phal Varga(Fruits) (Ch.Su.27) (Shu.Su.46)	Pakva kapitha(ripen Wood apple)	Kashay,Amla, Guru,doshahar,Ruchikar, Kanthashodhan.
	Badar(Jujube fruit)	Madhur,Asnhigda, Malbhedan, Vatkhahar.
	Jambu(Java Plum)	Grahi, Kaphapittaghna.
	Narang (Orange)	Amla, Madhur, Vishad, Ruchikar, Vatahar.

	Aamlak(Indian goosbery)	Ruksha, kashay,Amla, tridoshaghna.
	Beheda (Terminalia Bellirica fruit)	Ruksha, kashay, Amla, Kaphapittahar, Rasa-mansa-Medojanya Rogahara.
	Amlika (Tamarind)	Grahi,Ruksha,Bhedana
Harit Varga(Salads) (Ch.Su.27)	Aardrak (Ginger)	Rochan, Dipan, Vata Kaphahar.
	Jambir (Type of Lemon)	Rochan, Dipan, Kapha-vata hara,Ushna, Pachan.
	Surasa/Tulasi (Basil)	Kaphavatahara.
	Bal Mulak (Young Radhish)	Doshahara, Ruksha.
	Yavani (Carom seeds)	Ushna, Tiksha, Dipan.Bhedana, Kaphavatahara.
	Dhanyaka (Coriander)	Katu,Ushna, Rochan
	Lahasuna (Garlik)	Ashingdha, Ushna, Guru, vatahara.
Goras Varga(Milk and Milk Producta) (Ch.Su.27) (Shu.Su.45)	Godugdha (Cow milk)	Guru,shit, Ashigdha,Rasayan
	Chhag Dugdh (Goat milk)	Kashay,Laghu.
	Ushtra milk (camel milk)	Ruksha, Ushna, Laghu, vatakaphahara.
	Takra (Butter milk)	Ruksha, Shit, Laghu, Vatakaphahar.
Makshik Varga(Honey) (Ch.Su.27)	Makshik (Honey)	Guru, Ruksha, Kaphahar.
	Madhu Sharkaya (Honey sugar)	Ruksha,Chedan.
	Vishwabheshaj (Dry Ginger)	Dipan, Pachan, Ushna, Vatakaphahara.
	Shushka Pippali(dry long paper)	Kashya,Ushna, Dipan, kaphavatahara.

Aahar Yoni Varga/group of adjuvant of Food (Ch.Su.27) (Shu.Su.45)	Ajajai/Jira(cumin Seeds)	Rochan dipan, Vat-kaphahar,
	Marich(Black paper)	Ushna, Tikshan, Dipan, Chhedan, Kaphvatajit.
	Hingu (Asafoitida)	Katu,Ushana, Dipan, Laghu, Pachan,Rochan,Vatashleshma Vibandhahar.
	Saindav lavan (rock salt)	Rochan, Dipan.
	Erand tail (Castor Oil)	Sukshma, Ushna,Guru, Vatahar, anuloman.
	Til tail (Sesamum Oil)	Kashay, Ushna, Vyavayi, best Vatahara.
	Sarshap tail (Mustard Oil)	Kashay,Ushan, kaphavatahara.

5] Probable Mode of action of these Aahariy Dravyas in Hypothyroid- Maximum Dravyas has Ushna Virya, kashay, Katu,Amla Rasa, Ruksha,Vishad, Laghu, Tikshna and Lekhan properties. Which help to reduce Jatharagnimandya due to the Aam. These Dravyas Alleviates Vata and Kapha Doshas. So the blockages of channels/ Strotorodh like Rasa, Meda are removed. It results in increase of Dhatvagini. Amla and Lavana rasa help to do the Vatanulomana. So the Kapha Dosha in Hypothyroid gets reduced without the increase of Vata Dosha and they may help in breakdown of the disease pathology.

6] Aahar kalpana/Food Variants in Hypothyroid Disease- Charak, Shushruta,Vagbhata Acharya has described the various Aahar kalpana i.e. different forms of food in **Kruttana Varga/dietary preparations**. Kruta means the 'Spiced Food'. Sharangdhara has described the process of making these Aahar kalpana. These are as follows.

- I. Manda⁽²¹⁾** – The rice cooked with 14 times of water ,and the only the water is received called Manda. It is Agnidipak, Vaatanuloman,Swedajanan and Strotomridukar⁽²²⁾. So help to reduce the Aam, Strorodha and elevate Jatharagni.
- II. Peya⁽²³⁾** - The rice cooked with 14 times of water and the water with less amount of cooked rice is called as Peya. It has Laghu, Agnidipak, Swedajana, Vaatanuloman and Malanutoman properties⁽²⁴⁾.
- III. Yusha⁽²⁵⁾** – Yusha is more thick than Peya and has same properties.
- IV. Vilepi⁽²⁶⁾** – Aahar Dryavyas cooked with 4 times of water and the thick paste is received it is called as Vilepi. It has Tarpani, Grahi, Hrudyas and Rochan properties.

- V. **Bhakta or Odana**⁽²⁷⁾ – When 16 Pala rice is cooked with 14 times of water and excess water is drained the only boiled rice is called Bhakt or Odana. It is heavier/Guru than above said preparation, So it is **contraindicated in hypothyroid.**
- VI. **Kulmasha**⁽²⁸⁾ – Boiled and spiced rice is Guru, Ruksha and has Malabhedan Properties. So can be used in Hypothyroidism.
- VII. **Yavagu**- Acharya Charaka has mentioned some Yavagu kalpana in special conditions. Yavagu is the semi solid food prepared from Shook and Shimbi Dhanya with use of some medicinal Dravyas. These also can be used in Hypothyroid disease.
- 1) **Agnipradipak Yavagu**⁽²⁹⁾ – The Yavagu cooked with Pippali, Pipalimul, Chavya, Chitrak and Shunthi becomes Agnidipani.
 - 2) **Vatanulomani Yavagu**⁽³⁰⁾- Yavagu cooked with Abhaya, Pippalimula and Sunthi it becomes Vatanulomak.
 - 3) **Krushatakar Yavagu**⁽³¹⁾- Yavagu prepared with roasted gavedhuk and when served with Makshika, it will act as Krushtakar.

Conclusion:- From the above observation and discussion we can conclude that now a days the burden of Hypothyroid disease is increasing day by day in the society. Inactive physical life style and dietary changes enhances the Iodine deficiency and Autoimmunity which are two main causes of Primary Hypothyroidism. When we look towards the Hypothyroid through Aayurveda perspective, we found that it not merely limited to local disease like Galgand or Symptomatic presentation of Sthaulya. It is a Systemic disease cause due to Jatharagnimandya, formation of Aam, Rasa & Medovaha Strotasrodha. Right choice of food can help to prevent disease like Hypothyroid. When we apply the principle of. Apatarpan in Hypothyroid we can possibly make change in the disease. Aapatrpankara Aahariya Dravya are compiled here. Many of them are kaphahar ,still does not supercharge the Vata Dosha. Aahariya Dravyas when cooked with spices like Shunthi, Marich, Hingu, Yavani, Beheda it increases the properties of these Aahariya dravyas which help in breakdown of disease pathology. The above discussed Aahar Dravyas and their Aahar Kalpanas like Manda, Peya, Yusha, Vilepi, Kulmasha and Yavagu has Agnidipani, Aampachan and Shrotoshudhhikar properties. The Bhakta or Odan is contraindicated Aahar kalpana in Hypothyroid. The different permutation combination of the Aahar Dravyas can be used to prepare these Aahar Kalpana. We have to encourage the patients to consume these Aahar kalpana, so they can prevent or maintain the Hypothyroid disease state manageable for them.

“Aayurveda Aahara Is Not A Constraint, But A Favorable Choice For You”.

Further Scope Of The Study:- Here we had explored only Charak, Shushrut and Vagbhat Samhitas for this article. Review of Aahariy Dravyas from other Samhitas Like Bhavprakash, Yogratnakar have to be done. These Aahariya Dravyas should be evaluated for their chemical constituents like ‘Iodine’ with the help of modern techniques. Many of new Aahariy Dravya and their Kalpanas are part of a todays food habits. The properties of such Anukt Dravya and their Aahar Kalpana have to finalized with help of Aayurveda principles and . The clinical

study for the cause and effect relationship between physically inactive life style and dietary changes in disease formation of Hypothyroidism have to be done. Also the different permutation combination of these Aahar Kalapna to prevent and treat the disease have to be researched with the help of a modern techniques.

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Abbreviation:-

1. Ch. Su.- Charak Sutrastana
2. Shu. Su.- Sushrut Sutrasthana
3. Ash. Hru. Su.- Ashtang Hrudaya Sutrasthana