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Ayur-Panchagavya Therapy For Thyroid Disorders With Special Reference To Hypothyroidism-An Anukta Vyadhi

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ABSTRACT: -

Panchgavya, a term used to describe five major substances obtained from indigenous inbreed cow-Gomutra(urine), Gomaya(dung), Ksheera(milk), Dadhi(curd), Gritha (ghee). Ayur-Panchagvya, term used to denote panchagavya along with kasta and Rasa Aushadhi. Ancient Ayurvedic literature and recent research proves high medicinal value. Anukta vyadhi's are to be understood by Yukti and assessing Nidana panchaka; features of Hypothyroidism fall under Galaganda, Shotha(inflammation), Pandu(anaemia), Kshaya (debility) etc but not directly mentioned. Only treatment being hormone replacement therapy, opens up wide gateway for clinical research for achieving normal functionality of gland. Panchagavya therapy, Nidana parivarjana, healthy life style provides promising results with phyco-somatic symptomatic improvements and normalizing lab reports. Its mains principle being Apatarpana and bruhmana vyatyasa chikitsa. Upon observation the patients were either completely cured or show stable gland functions. The effect of treatment can be boosted with Prabhava of Daivavyapasharaya chikitsa. Along with positive effects there were few minor adverse effects like burning micturition, which was easily combated with sheeta upachara (cold therapy). Though at broader level this positive prognosis can be justified, need more detailed study in further days for establishment of standardised protocol.

Keywords: Panchagavya, Thyroid, Hypothyroidism, Galaganda, Anukta vyadhi



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INTRODUCTION

Ayur-Panchagavya term to represent combination of Panchagavya with Kasta and Rasa Aushadhi. Panchagavya therapy is branch of medical science called as cow pathy [1], mentioned in Ayurveda Samhita's as well. Panchgavya, a term used to describe five major substances obtained from indigenous inbreed cow-Gomutra (urine), Gomaya (dung), Ksheera (milk), Dadhi (curd), Gritha (ghee) [2]

The ancient ayurvedic literature suggests many pharmacological applications of *Panchgavya*. Ex: Shodaka(purifier), Balya(strengthen), Agni Deepaka(appetizer), Jwarahara(antipyretic), Shothahara (anti-inflammatory), Swasha-Krimihara, Kasahara, Paneeva Kshara, Lekhaka, Medhya [3], [4] etc. Recent research proves it to be potent anticancer [5] and anti-HIV agents [6]; immune-booster [7]; antioxidant [8]; bioenhancer of antibiotic activities [9], anti-fungal drugs [10] and drugs used against hypothyroidism etc. [11]

Each and every concept mentioned in *samhitha's* is unique and flexible, its understanding and applicability is in need to prevent and cure *vyadhi* irrespective of any era which is justified by *Anaadi, Anantha, Swabhavasamsiddhi, Bhava Swabhavanityatva* characteristics of *Ayurveda* [12]. Failure to diagnose is due to amalgamation of various symptoms in a single disease or the various symptoms untypical to a specific disease. *Anuktavyadhis* [13] are the unstated diseases in *samhitha* in terms of name, Eg: Hypothyroidism

(though can be correlated to *Galaganda*, *Shotha*(inflammation), *Pandu*(anaemia), *Kshaya* (debility) etc. Based on *Shaastra* principles, guidance, and experience, the *Vaidya* should apply *Yukti Pramana* to Understand the *Nidana Panchaka* and *Chikitsa* for Such *Vyadhi's*.

Other Challenges: Hesitance in clinical casesanxious about life long medications; Sub-clinical cases stay undiagnosed or accidently discovered; Report positive for Hypothyroidism but no symptoms and vice versa; Intermittent hormone imbalance; Aama: initial stages of shat kriya kaala of Vyadhi but disease not yet established misdiagnosed as disease [14]; Most cases show Aavarana which require vyatyasa chikitsa; Jeerna Vyadhi becomes krichra/yapya [15]

Thyroid Gland is part of endocrine system, highly vascular, produces 2 main hormones Triiodo-thyronine (T3) and Thyroxine (T4). Functions of thyroid are controlled by hypothalamus and pituitary gland through TRH and TSH. Without proper functionality system would fail as T4 is responsible for metabolism, mood, and body temperature, among other things and T3 aids digestive and metabolic function, bone health. If T3 and T4 levels are too low, more TSH will be produced and If they're too high, less TSH released, but this Positive and negative feedback mechanism only works if everything is functioning properly or leads to Hormone imbalance. Hypothyroidism is inadequate output of thyroid hormones; Primary- contributing over 95% with pathology in thyroid gland, lab reports show increased TSH and Decreased T3 and T4; Secondary and tertiary termed Central, by defect in Hypothalamus and pituitary(Hypopituitarism), investigation Shows decreased TSH and T3,T4. [16] Cautious in pregnancy and children as TSH plays role in growth and development

Signs and Symptoms: Dry hair and skin, receding hairline, puffy face, goitre, slow heartbeat, weight gain, constipation, possible infertility, increases risk of miscarriage, irregular menstrual cycle, cold intolerance, lethargy, muscle ache, apathy, facial and eye lid odema. Dull blank expression, extreme fatigue, thick tongue, slow speech, anorexia, brittle nail and hair, subnormal temperature, brady cardia, psychological- poor memory and concentration; poor hearing, hoarseness of voice, slow pulse rate, delayed reflex, cold extremities, poor appetite, shortness of breath [17]

Avastika(temporary)/ trigger: Fever(viral), Infections, Pregnancy, Stress and Anxiety (Ex: Exams), Iodine food, Coffee(Caffeine reduces body's absorption thyroid medications, increases chronic T4 secretion by increasing TSH pituitary release; Calcium in milk), Instant releasing sugars and carbohydrates (Ex: Carbonated drinks), Processed food, High fat meal (*Medas*), Alcohol, Hormone replacement therapy(Oral contraceptive; Oestrogen, progesterone bind to thyroid hormone and prevent absorptions, Multivitamins(Similar to hormones, minerals like iron, calcium binds and inhibit absorption), Autoimmune inflammations, Different medications prescribed for cancer, depression, osteoporosis, diabetes etc; Aama Etc^[18]

Can be **Misdiagnosed**, as it can mimic Jaundice, Anaemia, PCOS, IBS, Disorders of throat and oral cavity, Obesity, Infertility, Skin disorder,

Vitamin and mineral deficiency, Mental inabilities: Depression, sleep deprive, memory dysfunction etc. Also, it's important to note at different labs may have a varying normal range. for probable accurate diagnosis should always corelate with clinical diagnosis. physiological variation in pregnancy, new born, age, patients on steroid therapy, circadian variation Ex: 2 - 4 Am and 6 - 10 Pm; Recommended test for T3 and T4 is unbound fraction or free levels as it is metabolically active. **Gala** ganda mentioned in Sushrutha^{19,20}. Charaka²¹, *Vagbhata*²², Madhav Nidana samhitas²³, Bhoja²⁴ . Gala ganda swelling occurring in front of neck which can be compared to goiter associated with thyroid disorders ie., clearly defined swelling appears in the neck/ lower jaw, suspended pendulously like scrotum, either big or small in size. Acharya Charaka in Shvayathu Chikitsa defines Galaganda as a single swelling occurring on the side of the neck, and many swellings are Gandamala i.e., a garland of swellings. Vitiated vata(Shonita), kapha and meda reach the neck and nape of the neck getting lodged therein causing swelling which gradually develops with respective symptoms of Vataja, Kaphaja and Medoja Galaganda. Incurable/ bad prognosis if: feeling difficulty in breathing, smoothness and looseness of body parts, one year old disease, anorexia, dhatu Kshaya, hoarseness of voice. Curable, if but associated with complications like rhinitis, flank pain, cough, fever, vomiting will become incurable.

Treatment includes *Rakta mokshana* (Blood letting) with *Jalouka/ Siravedha*, *vamana*, *virechana*, *nasya*, *dhumapana*, *ghrita Paana*; *sweda* with *kanji*, *murta*, *Dugda* etc. *Alepa* and *Pariseka* reduces pain and swelling just like

water that immediately extinguishes the burning home [25]

Pathya (wholesome): Gomutra swinna mudga yusha; Yava Anna (Barley) with Trikatu(Shunti, Maricha, Pippali) and Madhu; Can also add Patola (Snake gourd) and Nimba (neem); Kulattha Yusha; Shigru; Triphala; Amrutha; Punarnava; Kakamachi; Gomutra Alodita Salasradi gana in Pratha kaala; Ghrita; Takra and so on [26]

Principle of treatment ^[27]: Apatarpana, for all sopha Pradhana upahrama. But once shoshana occurs or in deergakaalanubandi vyadhi should do vyatyasa chikitsa by Brmhana by considering individuals agni (digestion and metabolism) in the form of snehapana etc.

MATERIALS AND METHOD

In these studies, we used *Ayur-panchagavya* therapy to treat the hypothyroidism patients and study their prognosis.

a. **Preparation of medicine**: Each component of *Panchanga* used singly or in combination as it is or combined with herbal and mineral drugs to formulated into *Arista*, *Ghritha*, *Vati etc. Panchagavya Sanjeevani*: *Amalakki - Phyllanthus emblica*, *Vibhitaki - Terminalia bellerica*, *Haritaki - Terminalia chebula*, *Bilva - Aegle marmelos*, *Haridra - Curcuma longa*, *Tulsi - Ocimum sanctum*, *Kanchanara - Bauhinia variegate*, *Guduchi - Tinospora cordifolia*,

Jalakumbhi - Pistia startiotes, Shveta Aparajita - Clitoria ternatea with Gau jala (early morning collected) formulated into Arka(Distilled product) and added with Panchagavya Bhasma b. Patient examination:

- i. In *Roga-Rogi pareeksa* it was appreciated that all-*tridosha*, *sapthadathu*, *trimala*, both *shareera* and *manovaha shrotas*, *agni* were involved and their functions were impaired. In other words, all systems are involved in hypothyroidism.
- ii. **Investigations:** Routine blood and urine investigation; Thyroid function test T3, T4, TSH; If required Thyroid antibody test; LFT;USG abdomen and pelvis; Biopsy
- c. **Preparation of patient:** Deepana-pachana, shodana (Vamana/ virechana/ basti/raktamokshana/shirovirechana) and samsarjana karma followed depending on the bala and need of patient. But in few cases directly administered with Aushadha (medicine) as guided by acharya sushrutha, we should act immediately as if the house is burning with fire. [28]
- d. **Treatment** regimen: The prepared formulations administered orally (specifically sooryodaye, annakala and nishi aushadha kaala); local application (externally over thyroid gland); Nasya, Karnapoorana with panchagavya Ghrita: Gandusha with jala gau arka, Tankana/Spatika, Yastimadhu, Pushkara etc); Moordni taila/ Gritha picchu; Abyanga, Dhara Etc as per requirement. If required in addition: Varunadi Kashaya with Gau jala; Medhya dravya: Brahmi Ghrita, Manasa mitra vatakam. Sarasvatarista etc

e. Line of treatment: (Dosage vary as per patient-age, state etc)

- 1. Panchagavya Sanjeevani 2 tbs 0 2 tbs + 2. Kanchanara guggulu 1(ES) 0 1(B/F)

 (Bhishajya Ratnavali Galagandadi Roga Chikitsa 44/64-69)²⁹
- 3. Panchagavya Ghrita ½ tbs with Haridra saara, 1-time, Early morning
- 4. Tab. *Gau-Hareetaki* 1 0 1 A/F
- 5. Bhumyamalakki churna-1/2 tsp with Gau jala-2 tsp and 10 tsp sukoshna jala, 1 time, before sleep
- 6. Panchagavya Ghrita nasya
- 7. Panchagavya Ghrita local application over thyroid gland and umbilicus)
- f. Life Style: For synergizing the action of medications can be followed
- i. Yoga: Surya namaskara: Minimum 3 cycle-Maximum Ardha Shakti (Sweating on forehead, Increased breathing/gasping, tired) with manta uccharana and Swasa kriya; neck exercise, dhanurasana, trikonasana, shavasana, bhujangasana, surya nadi pranayama; or any form of activity Swimming/sports/dance/cycling ii. Naturopathy: Gobar therapy: Paste of Gomutra + Gomaya + Multani Matti + turmeric powder and whole-body application in reverse direction to hair follicles, then expose to early Morning sunlight, once semi dry should scrub and take bath
- iii. **Water therapy**: whenever required; 1 Lt hot water + 4 tsp lemon + *Saindhava lavan*. Consume slowly with in 1 hour. *Amla* and *ushna* tackles *vata and kapha*; also expels dosha.
- iv. *Daivavyapasharaya chikitsa*: Agnihotra homa/ ghee lamp and dhoop, panchagavya bead necklace, ash/vibhuti application to neck; Surya mantra with Surya nadi pranayama; Vishuddha chakra(satiated in neck) Beeja Mantra: Ham by concentrating on Panchavaktra shiva and Shakti Shakini swarupa of Lord Shiva and Parvathi³⁰

- v. Use of pesticide, chemical, hormone free food, also wash vegetables and fruits with diluted *Gomutra arka*; sprinking *Gomaya* and *Gomutra* in front of home or wipe home with water mixed with *Gomutra arka*
- vi. Patient Counselling- (Satwavajaya Chikitsa): Dinacharya(Jhiva Nirlekhakana, Danta Dhawana, Abyanga, Nasya, Gandusha, Nitya Vyayama etc); Aahara (Astavidha aahara visesha aayatana; Pathya-Apathya; Kshut and Trishna vega etc); Nidra (wake up in brahmi muhurtha, avoid divaswpna and ratri jaagarana etc); Importance of Nidana Parivarjana; Satwa Bala (Yama, Niyama, Japa etc)

Prakruthi Sthapana: Though laboratory reports and investigations are normal, patient is told to continue the medicine as *rasayana therapy* to vaish the reminant *Dushita dosha/ Guuda rogakaaraka's* and stimulate the regeneration/activation of normal functions.

CASE STUDY

1 (Source of information: Patient): 34 yr, M, Unmarried, works for steel plant factory and mining(dust, field work); Known case of hypothyroidism, was under thyronorm since 2016 is the study subject Under

Ayurpanchagavya treatment since 1.5 yrs

Hetu(Appreciated Causes)

- a. <u>Ahara</u>: Spicy food, Adyashana/ Alpa Bhojana; Akala Bhojana/ kshut vega dharana; Dadhi
- b. *Nidra*: Sleeping immediately after food; *Nidra vegadharana* (shift work)
- c. <u>Charya</u>: Vega dharana, Avyayama, Atiyaana(Field work)
- d. Manasika: Chinta
- e. Purva Vyadhi: Amlapitta (Amla ud<mark>gara, Hrut</mark> daha, Daha mutrata)
- f. <u>Family History</u>: Similar symptoms present (Report negative) in sibling

Lakshana(Signs and Symptoms)

- a. <u>Sthanika</u>: Slurring of speech, feeling of Lepana over tongue and thickening, *Swara Bheda*. (For these complaints upon advice underwent LFT and TFT); O/E: Goiter Palpable
- b. <u>Agni</u>: Agnimandya and annadwesha, Decreased Abyavarana shakti, increased trishna
- c. <u>Sarva Daihika</u>: Generalized weakness, Alasya, Rookshata, Weight gain
- d. <u>Miscellaneous</u>: Hair fall, Pain in calf muscles and difficulty in walking
- e. Respiratory: Deep and long breath
- f. Excretory: Mala bandha, Atisweda
- g. Nidra nasha
- h. Sexual inability, anxious about infertility......
- i. <u>Manas</u>: Anxiety, depression, bhaya and kampa- Social panic, irritable, can't sustain noise and bright light, mood swing, reduced concentration, lower memory, reduced enthusiasm, Hrud drava, Avara Satwa
- j. Others: Jaundice like symptoms
- (*Purvaroopa*: most symptoms since high school; aggravated since 5-6 years; reports positive since 2016)

CASE STUDY

- **2** (Source of information: Parents): 12 yr, F, student, known case of hypothyroidism, was under thyronorm since 2017(since age of 7 yrs)
- is study subject. Menarche: Not attended (Secondary sexual character development present). Under *Ayurpanchagavya* treatment since 2 yrs.

Hetu (Appreciated cause)	Lakshana (Signs and Symptoms)			
a. <u>Ahara</u> : Alpa Bhojana;	a. <u>Sthanika</u> : Slurring of speech, noticed change of voice, <i>Swara</i>			
Refuse vegetables, fruits	Bheda++; O/E: Goiter palpable ++			
etc; Akala Bhojana; relish	b. <u>Sarva Daihika</u> : Generalized weakness, <i>Alasya</i> , <i>Rookshata</i> ++,			
oily food; <i>dadhi</i> , sweets,	Growth retardation (weight and height not up to age) ++ (For these			
potato dishes(abhisyandi);	complaints upon advice did TFT); Wrinkles and pale+			
v. less intake of water	c. Agni: Agnimandya and annadwesha, Decreased Abyavarana shakti			
b. <i>Nidra: Dewaswapna</i> ,	d. Miscellaneous: Hair fall++, Calf Muscle pain, bony pains in lower			
more sleep	limbs			
c. <u>Charya</u> : Vega dharana,	e. Respiratory: slight variation			
Avyayama, Alasya	f. Excretory: Mala bandha, Atisweda			
d. Manasika: Krodha, dull,	g. Nidra: Atinidra, dose off in class always, take 15-20 min for			
lethargic	morning wake up			
f. <u>Purva Vyadhi</u> : Kaphaja 🦼	h. Manas: Anxiety, depression, irritable, mood swing, reduced			
Kasa, repeated infections	concentration, lower memory, <i>alakshya</i> , reduced enthusiasm, <i>avara</i>			
g. Family History: Present	Satwa; no self-initiation, need instruction and push for all activities			
(1 cousin)	and work			
h. Beeja Bhaga Avayava	i. Others: Frequent pain abdomen			
dusti?	(Purvaroopa: kaphaja Vyadhi since child; aggravated since 6 years			
	of age; reports positive since 2017)			

RESULT

The patients under this therapy feel satisfied and happy to appreciate positive prognosis and relieve/improvement in symptoms. Thyroid glands starts functioning normally, there is no need of hormone replacement therapy (hormonal

therapy was totally discontinued in tampering manner) and other measures. After a period of treatment schedule the laboratory reports showed normal range or maintained range; also, the patient got psychosomatic relief. In *purvaroopa Avastha* who followed this therapy was not at risk of hypothyroidism.

Patient – 1: Complete cure (Sukha Sadhya)

DATE	TSH	Т3	T4
28/9/2019	> 100 (0.27 - 4.20 μIU/ml)	32.4 (80-200 ng/dl)	0.90 (5.10-14.10 μg/dl)
23/10/2019	> 100	85.70	2.90
2020	0.767 (0.55 - 4.78 μIU/ml)	95.77 (60-181 ng/dl)	10.0 (4.5 – 10.9 μg/dl)
2021	0.87	110	9.5

- 2: Maintained normones level without normone therapy(1apya/krichra saaya:)					
DATE	TSH	Т3	T4		
21/06/2018	>150 (0.70 6.40 μIU/ml)	0.09 (0.94 – 2.41 ng/ml)	0.50 (6.40 – 13.30 μg/dl)		
27/10/2018	0.40	1.27	11.70		
24/01/2019 (10 yrs)	4.63 (0.5 – 4.7 μIU/ml)	123 (87.2 – 218.1 ng/dl)	13.7 (5.4 – 10.7 μg/dl)		
02/05/2019	30.22	118	9.3		
14/01/2020 (11 yrs)	2.52 (0.5 – 4.6 μIU/ml)	108 (86.6 – 199.8 ng/dl)	11 (5.2 – 10 µg/dl)		
23/01/2020	70.07	165	7		
24/09/2020	21.27	154	6.7		
18/01/2021 (12 yrs)	7.95	11.4	128		
23/01/2021	62.20	7.1	94		
06/08/2021	1.00	12.7	142		

Patient -2: Maintained hormones level without hormone therapy ($Yapya/krichra\ sadya$?)

Adverse observations: Burning micturition: mitigated upon coolants - Tender coconut, Barley, buttermilk, *Gulkand*, butter, *Dhanyaka hima*, *Tandulodaka*, *sariva panaka* etc based on patient condition.

DISCUSSION

When the disease can't be exactly identified, treatment can be done by correcting *Gunas* of impaired *Doshas* by understanding the *Nidana* panchaka etc.

Probable Mode of Action: This results and therapy can be substantiated by the *guna* and *karma* of the *dravya* used. It enhances the immuno-competence and improves general health of an individual; prevent the free radicals

formation; acts as an anti-oxidant, acts on thyroid gland, Hypothalamo-pituitary axis; in general, all system and glands of the body. As a prabhava destroys the unhealthy tissues and promotes healthy tissue formation. The potency of this therapy can be enhanced by daivavyapasharaya chikitsa such as mantri Karana of the dravya, mani dharana during the treatment period etc. Action on both Shareera and Manas (Psychosomatic treatment). Ghrita and Swarna (As per research Gomutra has nano-gold: Gas chromatography, mass spectroscopy etc) are capable to cross blood brain barrier, reach heart, minute cells; also does dhatwagni Vardhana. This can also be substantiated by Vytyasa chikitsa: Shodhana (purification), Ushna, (hot) Tikshna (sharp), Lekhana(scrapping), Bhedana, Agnideepana (Dhatu-Jatara-Bhuta) Vs Balya (strengthen), Bruhmana, Rasayana (rejuvenation), Anulomana and other properties. It corrects impaired Doshas, Agni, Shrotas And Does Poshana Of Dhatu -'Saamanya vriddhi kaaranam, veshesha cha hrasa hetu'. Pancha Mahabhuta Tatwa in Panchagavya corrects Tridosha (Loka-purusha samya Vaada). Also, its Satmya to all jeeva

The 2 main bases were *Go-mutra* (cow urine) being Ruksha (dry), teekshna (sharp), ushna (hot), shophahara (anti-inflammatory), panduhara (anemia), kapha-vata-medohara, rouchaka Nashana, shodhaneeya, agni Deepana (appetizer) media, Ksharayukta and Gau Ghrita is medhya (intellect), agni-bala-ayu Vardhana, Vrushya, provides praja, kanti, swara; rukshgna; ushnodaka is kapha-meda-vatagna, swayatuswasha-kasa hara. agnideepaka. These properties are exactly opposite to that of Hypothyroid disease *Lakshana* and *Nidana*, hence does samprapti vighatana^{31,32}

CONCLUSION

In adopting the treatment for the Anukta vyadhi's Physician's Yukthi (Planning, Assessment, Reasoning/rational) plays a major role Eg: Understanding Pradhanya Samprapti and Vikalpa Samprapti. Ayur-panchagavya therapy is the Holistic approach towards the patient, which can be categorised under all three forms of chikitsa- Daivayapasharaya, Yukthiyapashraya, Satwaavaja. Application valid in Astanga Ayurveda.

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