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Case Report

Effect of *Aparajita* (*Shweta*) *Clitoria Ternatea* roots with *ghrita* in the management of *Galaganda* (Hypothyroidism) wrt *Garavisha*: A case study

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Abstract

In *Ayurveda*, a closely related condition known as *Galaganda* (Hypothyroidism), is described, rooted in vitiation of *Kapha-Vata dosha*, *Agnimandya* (impaired metabolic fire), and *Dhatudushti* (tissue derangement). Modern management largely depends on synthetic hormone replacement, which addresses symptoms but often fails to correct underlying systemic imbalances. This 80-day case study explores the *Ayurvedic* management of hypothyroidism using *Aparajita Shweta* (*Clitoria ternatea* Linn.) root powder administered with *Ghrita* (clarified butter) A classical Ayurveda combination to combat above condition mentioned in *Yogartnakar*. The intervention focused on correcting *Doshic* imbalance, enhancing *Agni*, and detoxifying *Aama* and *Garavisha* influences. A marked improvement was observed in both subjective symptoms (fatigue, swelling, skin dryness) and objective markers such as weight and TSH level, which reduced from 14.47 µU/mL to 7.17 µU/mL. Clinical grading showed significant reduction in neck swelling and associated discomfort. The findings emphasize the herb's *Shothahara* (anti-inflammatory), *Kanthya* (beneficial for throat disorders), *Vishaghna* (detoxifying), *Agnideepana* (digestive fire enhancing), and *Medhya* (nootropic) properties, suggesting a promising *Ayurvedic* approach for the management of *Galaganda*(Hypothyroidism), particularly in cases attributed to *Garavisha-janya Galaganda*.A condition resulting from chronic exposure to artificial or incompatible toxins (Garavisha). The use of *Ghrita* (Cows ghee) as an *anupana* (therapeutic carrier) significantly enhances the bioavailability and potency of the herbal formulation. *Ghrita* possesses *Yogavahi karma* (its unique ability to carry the properties of the substances it is combined with deep into the tissues without altering their nature) supported by *Trikatu* and *Gandharvaharitaki* for *Agni* enhancement, Ama digestion and *Vatanulomana*.

Keywords: *Galaganda,* Hypothyroidism, *Aparajita (Shweta),* TSH, *Garavisha,* Good Health and well being

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Introduction

Hypothyroidism is one of the most prevalent endocrine disorders worldwide and 11% in India (1), characterized by Hypometabolism, glandular dysfunction and multisystem involvement. *Ayurveda*, the life science, understands all diseases as the result of *doshic* imbalance, impairment of Agni (digestive fire), and derangement of *Dhatus* (body tissues). While the thyroid gland itself is not explicitly mentioned in classical *Ayurvedic* texts, the condition described as *Galaganda* by *Acharya Charaka(2) and Sushruta (3)* closely resembles modern descriptions of Hypothyroidism. This 80-day case study explores the *Ayurvedic* management of hypothyroidism using *Aparajita Shweta* (*Clitoria ternatea* Linn.) root powder administered with *Ghrita* (clarified butter) A classical Ayurveda combination to combat this condition mentioned in *Yogartnakar* (4)

The pathogenesis of *Galaganda* is primarily attributed to the dominance of *Kapha* and *Vata Doshas*, along with the vitiation of *Rasa Dhatu* (lymphatic fluid) and *Meda Dhatu* (metabolic fat). A central factor in this pathological process is the impairment of Agni, leading to the accumulation of *Aama*—a toxic by-product of incomplete digestion. *Aama* obstructs normal channels (*srotas*), disrupts tissue metabolism (*dhatu poshana*), and contributes to the manifestation of localized swelling such as *Galaganda(5)*.

Moreover, chronic exposure to *Garvisha*—subtle environmental toxins, incompatible dietary and lifestyle factors, and persistent low-grade poisons—can further aggravate *doshic* imbalance and promote *Aama* formation. *Garvisha* and *Aama* together create a deep-seated pathology, leading to stubborn and chronic disorders such as hypothyroidism (6)

The results highlight the herb's *Shothahara* (anti-inflammatory), *Kanthya* (beneficial for throat disorders), *Vishaghna* (detoxifying), *Agnideepana* (digestive fire enhancing), and *Medhya* (nootropic) properties, suggesting a promising *Ayurvedic* approach for the

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management of *Galaganda (*7) (Hypothyroidism), particularly in cases attributed to *Garavisha-janya Galaganda*.A condition resulting from chronic exposure to artificial or incompatible toxins (Garavisha). The use of *Ghrita* (Cows ghee) as an *anupana* (therapeutic carrier) significantly enhances the bioavailability and potency of the herbal formulation. *Ghrita* possesses *Yogavahi karma* (its unique ability to carry the properties of the substances it is combined with deep into the tissues without altering their nature (8). Furthermore, *Ghrita* is endowed with *Agnideepana* (digestive stimulant) and *Medhya* (nootropic) actions, which support its efficacy in addressing the metabolic and cognitive dimensions of hypothyroidism.) (9).

Allopathic science treatment of hypothyroidism through synthetic hormone replacement often manages symptoms but does not address these deeper causes. Ayurveda, in contrast, offers a n systemic approach that focuses on restoring *Agni*, eliminating *Aama*, neutralizing the effects of *Garavisha*, and correcting *dosha* and *dhatu* imbalances at their root. In this context, *Aparajita Shweta* (*Clitoria ternatea* Linn.), known for its *Kapha-Vata* pacifying, Agni-enhancing, and detoxifying properties, combined with *Ghrita* (clarified butter), is explored as a therapeutic intervention. This case study assesses the clinical effectiveness of this combination in a patient of hypothyroidism manifesting with features of *Galaganda*, emphasizing the *Ayurvedic* principles of disease reversal at the fundamental level.

Case report

35 Year /female patient residing at Babhulagaon working as a farmer came to private OPD at Pandharapur with presenting complaints of Neck swelling, fatigue, dry skin, poor appetite, constipation, and weight gain.

History

The patient is a 35-year-old female farmer engaged in pomegranate cultivation for the past five years. Throughout this period, she has been consistently exposed to various agricultural chemicals without adequate protective measures. She also reports regular consumption of fruits potentially contaminated with chemical residues.

Regarding her lifestyle habits, she has been chewing tobacco regularly for the past 7–8 years to maintain alertness and consumes hot water with honey daily in the early morning to relieve constipation. Over the past 2–3 years, she gradually developed symptoms including increased lethargy, pallor, weight gain, hoarseness of voice, constipation, and swelling near the neck region, which is characteristic of *Galaganda* (clinically correlating with hypothyroidism). Her dietary habits (consuming *Viruddhahara*) combined with chronic exposure to agricultural chemicals and daily consumption of honey (an incompatible combination when improperly used or heated, according to Ayurvedic principles) likely contributed to internal toxin accumulation (*Garavisha*). These chronic dietary and environmental exposures compromised her *Agni* (digestive fire), leading to *Mandagni*, *Ama* (toxins) production, *Dhatu Dushti* (vitiation of tissues), and eventually manifested clinically as *Galaganda* — correlating with hypothyroidism.

Clinical findings

Subjective parameters: Fatigue, swelling, dry skin, appetite.

Objective parameters: Neck swelling, weight, TSH levels (Pre and Post).

Visual documentation (Pre and Post-treatment images of neck).

Physical Examination - On general physical examination, the patient was conscious, oriented, and cooperative. Moderate pallor was noted. No icterus, cyanosis, clubbing, or lymphadenopathy was present. The skin appeared dry and coarse, corroborating the *Sparsha* findings. Mild facial puffiness was observed. The patient's body habitus was Madhyam (medium built). No signs of acute distress were noted. Local examination of the neck revealed a diffuse, soft to firm swelling in the anterior neck region, consistent with Grade 2 goitre as per WHO criteria. The swelling moved on deglutition and was non-tender. No bruit or nodularity was palpable.

Table 1: *Ashtavidha Pariksha*

1.Nadi (Pulse)	Vatpradhan Kaphanubandhit
2.Mala (Stool)	Kathinya Hard stool
3.Mutra (Urine)	Pitabh Yellowish, 5 times a day 1 time in night
4.Jivha (Tongue)	Saam (Coated)
5.Shabda (Speech)	Aspashth Khar, Hoarsened
6.Sparsha (Touch)	Sheet Ruksha, Cold and Dry
7.Drika (Eye)	Pallor+
8.Akriti (Built)	Madhyam, Medium built

Table 2: Vital Parameters

Pulse	81 /min	Prakriti	Vatkaphaj
SpO_2	98%	Height	153 cm
BP	120/90 mmhg	Weight	68.9 kg
Bala	Madhyam Medium		

Systemic Examination:

Respiratory and cardiovascular systems were within normal limits with clear breath sounds and normal heart sounds. Abdomen was soft, non-tender, with normal bowel activity. Neurological examination showed the patient to be alert and oriented, with no focal deficits. Musculoskeletal system was normal except for occasional muscle cramps reported by the patient.

***Samprapti* / Pathogensis**

Garvisha Sevana (Chronic exposure to chemical toxins)
↓
Mandagni (Impaired digestion)
↓
Ama (Toxin accumulation)
↓
Kapha Dosha + *Vata Dosha* Vitiation
↓
Srotorodha (Obstruction of channels)
↓
Dushti (vitiation) of: *Ras Dhatu* (plasma, nutrition) and *Meda Dhatu* (fat tissue)
↓
Granthi Utpatti (Formation of swelling - *Galaganda*)

Diagnosis

Differential Diagnosis: Differential diagnoses such as Iodine-deficiency Goitre, secondary hypothyroidism, anaemia, and metabolic disorders were evaluated and excluded on the basis of the patient's etiological factors, including chronic pesticide exposure, chemically contaminated food intake, and long-term tobacco chewing, along with her clinical findings and TSH–T3/T4 pattern.

Primary Diagnosis (*Ayurveda*): *Galaganda*: correlating with Hypothyroidism feature (*Karyaswarup vyadhi*).

Underlying Cause: *Garvishajanya Vyadhi*: disease due to chronic internal toxicity (likely from chemical exposure, unhealthy food habits, and tobacco chewing).(*Karanaswarup vyadhi*)

Modern Correlation:
Primary Hypothyroidism secondary to Chronic Exposure to pesticides used in farming, chemical residues in food and toxins from long term tobacco chewing induced toxicity.

Table 3: Symptom Grading System (Subjective & Objective) (10)
(Adapted from WHO Goitre Grading and *Ayurvedic* symptomatology) (10)

Sr. No.	Parameter	Gradation			
		0	1	2	3
		Subjective Criteria			
1	*Nibaddha Shwayathu* (Neck Swelling)	No swelling	Mild swelling (Palpable but not visible)	Moderate swelling (Palpable and Visible)	Severe /Huge swelling (Enlarged Thyroid gland)
2	*Rasa-Aasyata* (changes in taste)	No changes in *Rasa-Aasyata*	*Snigdhasyata* (only coated tongue)	*Madhuryamasyata* (Taste sense changes toward sweetness)	*Vairasyam-asyata* (tasteless-ness)
3	*Varna Parivartan* (changes in colour)	No changes in colour	Mild discolouration over affected site	Moderate visible colour changes towards *Shyava/Aruna/Pandu*	Complete change of colour of affected site
4	*Gala-Talu Parivartan* (Throat and neck changes)	No changes	Mild difficulty like dysphagia	Moderate difficulty like *Talugala prashosh* (sore throat), *Jantogaleanushabdam* (slurred speech)	Severe difficulty like severe Dysphagia, Aphagia
5	*Ruja*(pain at site of swelling)	No pain	Only *Kndu* (itching) but no *Ruja* (pain)	*Kandu* (Itching) with Moderate or tolerable *Ruja* (pain)	severe *Kandu* (Itching) and Severe pain (*Ruja*) both
6	Weight gain	BMI <20	BMI 20-25	BMI 25-30	BMI 30-35
7	Muscle cramps	Not present	Once in a week	Twice / Thrice a week	Continuously present
8	Dry& coarse skin	No dryness	Dryness after bath only	Dryness for whole day but relieved by oil application	Dryness not even relieved by oil application
9	Fatigue	No fatigue	Mild fatigue	Moderate fatigue	Severe fatigue
		Objective Criteria			
1	TSH level	0.30- 6.00 IU/ml	6.00-7.00 IU/ml	7.00-8.00 IU/ml	>8.00 IU/ml

Therapeutic intervention

Table 5: Intervention Chart

Date of follow up	Drug	Anupana	Duration & Dose
17 May 2024	1. Aparajita(Shweta) (*Clitoria terenatea)* root powder	Goghrita 1 tsp	3gm twice a day after food that (vyanodana.) for 30 days
	2.Gandharvaharitaki powder	Lukewarm water half cup	3gm HS for 30 days
	3.Trikatu powder (11) a.Sunthi- Zingiber officinale b.Marich- *Piper nigrum* c.Pippali- *Piper longum*	Lukewarm water half cup	2gm daily before food twice a day for 15 days
16 June 2024	1. Aparajita(Shweta) (*Clitoria terenatea)* root powder	Goghrita 1 tsp	3gm twice a day after food that is (vyanodana.) for 30 days
17 July 2024	1. Aparajita(Shweta) (*Clitoria terenatea)* root powder	Goghrita 1 tsp	2 gm twice a day after food that is (vyanodana.) for 15 days
10 August 2024	Pt shown reports and gave follow up of wellbeing and could not continue further treatment plan .		

Nidaan Parivarjan - Patient is taken away from causative factors.

Table 6: *Pathya- Apathya* (Do's and don'ts)

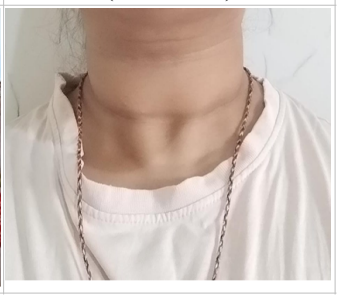
Time	Meal / Activity	*Pathya*	*Ayurvedic* Rationale	*Apathya*
6:00–6:30 AM	*Ushapana* (water intake)	- Warm water	Stimulates *Agni*, melts *Kapha*, clears *Aama*	Cold water to drink,Hot water and *Madhu (Honey)* as it is *Viruddhahar (*Incompatible food*)*
7:30–8:00 AM	Morning Regimen	- *Kavala* with *Triphala kwath*a for 5 to 10 min. *Pratimarsh Nasya* with *Goghruta* 1 to 2 drops in each nostril.(14)	Clears *Kapha* from *Uttamanga* (head region), improves thyroid function	-
8:30 AM	Breakfast	- *Mudga yusha* (mung broth) - *Laja manda* (light gruel from old rice) - Cooked vegetables: *Patola*, *Shigru*, *Tikta-Katu rasa dravyas(15,16)*	Light and digestible, *Kapha-Vata hara*	Avoid Fruits which She is taking since years.
12:30–1:00 PM	Lunch	- *Yavagu* (rice gruel) with *Mudga Yusha* - Vegetables: *Kakamachi*, *Shigru*, cooked in ghee with cumin - *Takra* (buttermilk) with *Trikatu 1 cup.* *Tiktaraspradhan (Bitter taste) (12)fruit vegetables – eg. Bottle gourd,pumpkin,Bitter gourd, Ridge gourd Jawar(Sorghum) Roti or Wheat Phulka*	Reduces *Kapha*, supports digestion and metabolism	Taking food without hunger and bakery products and heavy meals
5:30–6:00 PM	Evening Snack	- Roasted *Yava* (barley) - Soaked dry grapes or figs (optional)	*Vatanulomana*, light digestive support	Avoid tea and biscuits,
7:00–8:00 PM	Dinner	- *Manda* (thin rice water) or *Mudga soup* - Steamed vegetables with *Hingu* and *Jeeraka* , *Tiktaraspradhan (Bitter taste) fruit vegetables – eg. Bottle gourd,pumpkin,Bitter gourd, Ridge gourd Jawar(Sorghum) Roti or Wheat Phulka*	Light, reduces *Kapha*, prevents night-time *Ama* formation	Avoid Heavy Diet ,curd, Banana,Milk in night.

Results and outcome

Table 7: Pre and Post-Treatment Assessment

Sr. No.	Assessment Parameters Subjective	Before Treatment 17 May 2024	After Treatment 10 Aug.2024
1	*Nibaddha Shwayathu* (Neck Swelling)	2	1
2	*Rasa-Aasyata* (changes in taste)	1	0
3	*Varna Parivartan (*changes in colour)	1	1
4	*Gala-Talu Parivartan* (Throat and neck changes)	2	0
5	*Ruja* (pain at site of swelling)	2	1
6	Weight gain	2	0
7	Muscle cramps	1	0
8	Dry & coarse skin	2	1
9	Fatigue	2	0
Sr. No.	Assessment Parameters Objective		
1	TSH Level	14.473 µU/mL	7.17 µU/mL

Pictorial representation of *Galagand* (Neck Swelling)

Figure 2: Pretreatment (17/05/2024)	Figure 3: Posttreatment (10-08-2024)
	

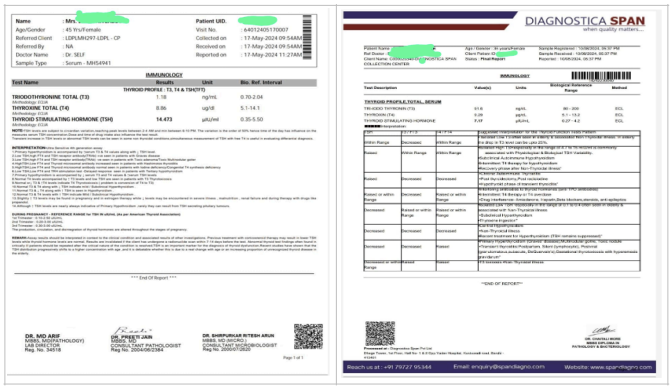
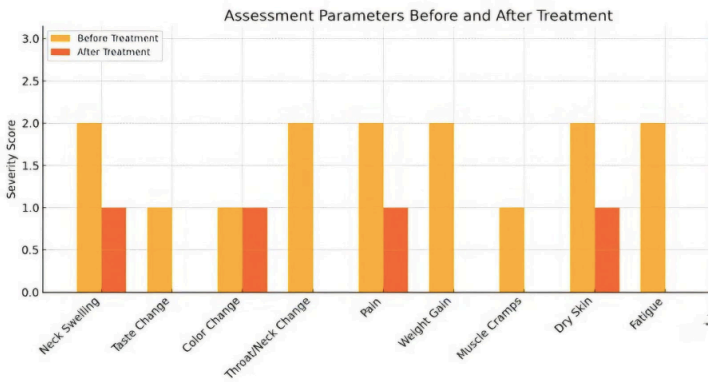


Figure 1: Assessment parameters before and after treatment



Discussion

The pathogenesis of *Galaganda* in *Ayurveda* closely mirrors the clinical characteristics of hypothyroidism, with an imbalance of *Kapha* and *Vata doshas*, as well as the impairment of *Rasa Dhatu* (plasma or nutrient fluid) and *Meda Dhatu* (fat tissue), which correspond to the metabolic and hormonal disturbances observed in modern endocrinology. The involvement of *Kapha-Vata doshas*, along with *Agnimandya* (diminished digestive fire) and

Meda-Rasa Dushti (vitiation of fat and plasma tissues), leads to *Srotorodha* (obstruction of bodily channels), resulting in metabolic and endocrine dysfunctions.

Role of *Aparajita*

Aparajita (*Clitoria ternatea* Linn.) is traditionally recommended in conditions such as *Galaganda* (thyroid swelling) and *Vishavikara* (toxic disorders), and is described in classical texts like *Kaiyadeva Nighantu(13)*, *Sharangadhar Samhita(14)* and *Sushruta Samhita* as having *Vishaghna* (antitoxic), *Medhya* (cognitive-supportive) and *Shothahara* (anti-inflammatory) properties. It is included under the *Arkadigana* category by *Sushruta(15)*, indicating its relevance in disorders involving glandular enlargement and toxin-related pathology. Its *Tikta* and *Katu Rasa* (bitter–pungent taste), *Sheetavirya* (cool potency) and *Ruksha–Laghu guna* (dry and light qualities) help pacify *Kapha* (phlegmatic dosha), improve *Agni* (metabolic activity) and reduce inflammatory swelling. Modern pharmacological studies (17–19) corroborate these traditional uses, reporting antioxidant, anti-inflammatory, nootropic, antidiabetic, antilipidaemic and diuretic activities of *Clitoria ternatea*. These combined actions offer a coherent scientific basis for its use in *Galaganda*, especially where metabolic imbalance, oxidative stress and inflammation are prominent.

Role of Ghee as a Anupana

Ghrita (clarified butter) served as the primary *Anupana* (carrier). In *Ayurvedic* classics, *Ghrita* is praised for its *Vishaghna* (antitoxic), *Agnivardhaka* (digestive fire-enhancing), *Medhya* (intellect-promoting), and *Rasayana* (rejuvenating) properties. Its *Samskara Anuvartana* (capacity to absorb and carry the properties of co-administered drugs) enables deeper tissue penetration, particularly into the *Majjadhatu* (nervous tissue) and endocrine organs such as the thyroid (20). This not only potentiates the pharmacodynamics effects of *Aparajita* but also ensures enhanced bioavailability at the target site. The therapeutic application of *Aparajita*, with its documented antioxidant, anti- inflammatory, antilipidemic, nootropic, and adaptogenic properties, directly addresses the underlying pathogenesis.

Role of *Trikatu*

In *Ayurvedic* therapeutics, addressing the root cause is paramount and in this case, *Trikatu* (a powerful trio of *Shunthi*, *Maricha*, and *Pippali*) played a vital role in dismantling the metabolic blockade central to *Galaganda* and *hypothyroidism*. With its potent *Deepana* and *Pachana* actions, *Trikatu* not only reignited a sluggish *Agni* but also catalysed the digestion and elimination of *Aama*, a key pathogenic factor. By enhancing the bioavailability of accompanying herbs, it amplified the overall therapeutic impact. The supportive use of *Trikatu* enhanced *Agni* and facilitated *Amapachana*, while *Ghrita* functioned as an efficient carrier (*Anupana*) with its *Vishaghna*, *Agnivardhaka*, *Medhya*, and *Rasayana* properties, promoting deep tissue nourishment and detoxification. (21)

Role of *Gandharvaharitaki*

Gandharvaharitaki further strengthened this foundation by promoting *Vatanulomana*, facilitating smooth bowel regulation, and accelerating systemic detoxification. Furthermore, the synergistic interplay of these formulations created a physiologically conducive environment for the action of *Aparajita Shweta* and *Ghrita*, enabling deeper penetration, tissue-level correction, and sustained clinical recovery.

Cumulative effect of Medicine

Thus, the combined use of *Shwetaparajita Moola* with *Ghrita* offers a comprehensive approach to managing *Galaganda* correlating with hypothyroidism — targeting the root pathology by restoring *Agni*, clearing *Ama*, detoxifying the system, and rejuvenating affected tissues. This integrative approach emphasizes the efficacy and precision of traditional *Ayurvedic* formulations in re-establishing endocrine balance from within.

Conclusion

This case study demonstrates the effectiveness of an *Ayurvedic* intervention in the management of *Galaganda* (hypothyroidism) using *Shwetaparajita Moola* (*Clitoria ternatea* root), *Trikatu* (metabolic stimulants) and *Ghrita* (medicated ghee). The patient's prolonged exposure to environmental toxins, *Viruddhahara* (incompatible diet) and faulty lifestyle contributed to *Agnimandya* (reduced metabolic activity), *Ama* formation (metabolic toxins), *Dhatu Dushti* (tissue impairment) and *Srotorodha* (channel obstruction), forming the *Ayurvedic* basis of disease progression. The treatment not only improved the patient's symptoms and clinical parameters but also addressed the underlying *Doshic* imbalance, reflecting the value of a holistic, multi-dimensional approach. Overall, this case suggests that classical *Ayurvedic* formulations, when selected in alignment with *Nidana* (etiology) and *Samprapti* (pathogenesis), may offer a promising natural option for managing hypothyroidism, warranting further clinical evaluation in larger cohorts.

Patient perspective

Patients feelings is reported here in his own words as follows -

"Before the treatment, I used to feel constantly tired, had a poor appetite, and struggled with constipation. The swelling in my neck also worried me a lot, and I was concerned about relying on lifelong medication for hypothyroidism. After starting the *Ayurvedic* treatment, I noticed gradual but meaningful changes—my energy levels improved, my digestion became regular, and my appetite returned. Most noticeably, the swelling in my neck reduced, which gave me a lot of relief and confidence. I also liked that the treatment was natural, simple, and involved only a few medicines. I feel happy and more active. Thank you so much Doctor."

Informed consent

The patient had given informed consent. Consent was explained thoroughly to the patient. He also permitted the publication of data.

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