

AYURVEDIC MANAGEMENT OF ACANTHOSIS NIGRICANS – A CASE STUDY

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ABSTRACT

Acanthosis nigricans (AN) is a dermatological condition that has been recognized for more than a hundred years. AN in adolescents occurs frequently associated with obesity. It is a chronic illness that often has its roots in childhood and has a tremendous impact on the individual's health in the future. Diet and lifestyle play a major role in such conditions. There is a popular saying, "you are truly what you eat". Ayurveda's take on this old adage is, "you are what you assimilate". A radiant, clear complexion begins with proper nutrition, efficient digestion and assimilation of nutrients by body, as well as regular elimination. *Ama* inside our body makes a person diseased from within reflecting on the external skin. Due to *Mandagni*, *ama* is formed, and this is the root cause of all diseases. This makes *Shodhana*, undoubtedly the best therapeutic intervention to eliminate the internal

toxins and rejuvenate the body. This is a case of a young girl with complaints of irregular menstrual cycle since menarche along with appearance of blackish discoloration over the neck, flanks, chest, abdominal region and thigh region for 1.5 years. There was significant improvement in her menstrual cycle irregularity and pigmentation with *Ayurvedic* line of management by *panchakarma* and oral *Ayurvedic* medicines. With continued treatment her menstrual cycle got regular and blackish discoloration reduced completely.

KEYWORDS: *Acanthosis nigricans*, *PCOS*, *Kshudra kusta*, *virechana*.

INTRODUCTION

Acanthosis nigricans (AN) is characterized by specific skin changes due to insulin resistance. The skin is thickened and pigmented. Commonly affected sites are nape of the neck, inner thighs, groin and axilla.^[1] It is commonly associated with PCOS, obesity and diabetes patients. Obesity alone is not believed to be responsible for the presence of AN, however, hyperinsulinemia leads to the development of AN because the increased insulin levels activate IGF – 1 receptor that are responsible for the proliferation of the epidermis, thus justifying the high prevalence of AN in the individuals with insulin resistance.^[2] Diagnosis of AN is usually clinical one. Women with Acanthosis nigricans have a higher incidence of developing diabetes due to insulin resistance. The treatment involves the weight loss, use of metformin and topical keratolytic are helpful, but these are not recommended for long term usage.

So, in order to reduce the side effects of these medicine, *Ayurvedic* treatment plays a better role in both overall health by removing the and development of the person.

CASE REPORT

A 15-year-old unmarried female patient came to OPD of *Prasuti tantra and Stree roga*, S.S.C.A.S.R.& H. Bengaluru with complaints of irregular menstrual cycle since 2 years. Also, complaints of dark velvety discoloration of neck, armpits, knuckles and cubital fossa after menarche.

Personal history

Diet: 3 times / day, predominately non vegetarian.

Sleep: 5 to 6 hours / night.

Appetite: good

Bowel: once / day

Habits: nil

Micturition: 4 to 5 times / day

- Allergic Rashes – On consumption of outside food (cooking oil)
- Diet – 3 times/ day, predominantly non vegetarian
- Food habits – Madhura rasa pradhana, sheeta ahaara (ice creams), abhishyandi bhojan (dadhi sevana, paneer, junk food, potato chips)

- Vihara – Avyayama, divasvapna

Menstrual history

Age of Menarche – 12 years

LMP: 28/08/2022

Flow: irregular

D₁ – 2 pads / day (completely soaked)

D₂ – 2 pads / day (80% soakage)

D₃₋₅ – 1 pad / day (spotting)

Interval: 45 – 60 days

Anubandhi vedana

Clots: nil

Pain: present occasionally

Color: red

Foul smell: present

Samsthanika Pareeksha (systemic examination)

R/S: Nvbs heard, no added sounds.

CVS: S1 S2 heard, no murmur sounds heard

CNS: Well oriented to time, place and person

Sthanika Preeksha (Local examination)

Neck: No lymph adenopathy, Pigmentation – present

Breast examination: B/L symmetrical, soft, non-tenderness

P/A:

Inspection: No scar, discoloration present

Palpation: Soft, non-tenderness

Percussion: Normal

Auscultation: Normal

Lesion: Blackish brown color pigmentation

Distribution: Neck, Armpits, Knuckles, Trunk and cubital region

Itching: occasionally present

Samprapthi ghataka

- Dosha – kapha and vata
- Dushya – Dhatu-Rasa, Rakta, medo,

- Upadhatu - Artava
- Agni – Jatharagni
- Ama- Jatharagnijanya ama
- Srotas – Rasavaha, artavavaha
- Sroto dushti - sanga
- Udbhava Sthana – Twak, mamsa, rakta, garbhashaya
- Sanchara Sthana – Sarwashareera, Artava vaha srotas.
- Vyakta Sthana - Twak, mamsa and Yoni
- Rogamarga – Abhyantara and bahya

Diagnosis: PCOS associated with Acanthosis nigricans

Treatment

Classical vamana planned

Poorva karma	Medicine	Days
<i>Deepana Pachana</i>	<ul style="list-style-type: none"> • <i>Triphala churna</i> – 1tsp HS with hot water at bed time • <i>Chitrakadi vati</i> – 2BD before food • <i>Panchakola phanta</i> – 30ml BD before food 	3 days
<i>Snehapana</i>	<i>Varunadi Ghrita</i> + <i>Panchatiktaka grita</i>	4 days
<i>Sarvanga Abhyanga and Baspa Sweda</i>	777 oil	3 days

On 3rd day of *Sarvanga Abhyanga* and followed *Baspa Sweda*, *vamana* was induced.

Observation – 8 vegas occurred (*Pravara shuddhi*).

Samsarjana krama was for 1 week.

Internal medication given

- *Asanadi Kashaya* + *Aragwadadi Kashaya* 20ml BD After Food
- *Chandraprabha vati* 2 BD After Food
- *T. Triphala* 2 HS After Food X 1 month given

Follow up

After 2 cycle she came to our OPD with the complaints of previous complaint of irregular menstrual cycle and blackish brown discoloration has reduced during last cycle and further oral medication was continued for another 1 month. She came to our hospital with regular menstrual cycle and completely reduced blackish discoloration of her skin.

Advice on discharge

Avoid junk, hot, spicy and cold food items which increases kapha and vata kara ahara and vihara like avyayama, divasvapana.


Intake of green leafy vegetables, Tila, masha, lashuna, kulatha, gomutra, takra with water and vihara like Yoga, pranayama should be adopted.

Investigations

USG	Before treatment (dated on 21/05/2022)	After treatment (dated on 18/04/2023)
Uterus	Normal and Anteverted	Anteverted, measures 6.8 x 2.8 x 4.1 cm, normal in size, shows normal echo pattern.
ET	5 mm	6.6 mm
Right Ovary	Bulky and measures 4.2 x 3.8 x 2.7 cm (vol. 23.5cc)	Measures 2.5 x 1.4 x 2.4 cm (vol. 4.8cc)
Left Ovary	Bulky and measures 4.2 x 4.0 x 2.9 cm (vol. 26.0cc)	Measures 3.0 x 2.0 x 3.2 cm (vol. 10.5 cc)
IMPRESSION	Features suggestive of PCOD.	Both the ovaries show polycystic morphology.

Hematological investigation dated on 26/6/2022

- HB – 12.5 g%
- TC – 9,800 cells/ Cumm
- Platelets – 3.4 lakhs/Cumm
- RBS – 103 mg/dl
- HBA1c – 5.6 %
- TSH – 2.4 mIU

Before treatment	After treatment
	



	Before treatment	After treatment
Rotterdam criteria	2 out of 3	1
Burke's classification	4 out of 4	1

DISCUSSION

As patient was having PCOS which is one the reason for irregular menstrual cycle and insulin resistance, so it was managed by *classical Vamana* which alleviate primarily *kapha* and some extent *pitta* also.^[3] Since the patient was obese where her BMI was 29.3 kg/m², *sthoulya* is *medopradoshaja* and *kapha paradhana vyadhi*. In modern medical science it can be compared with “obesity”, which is defined as excess deposition of body fat that poses a health risk.^[4] *Vamana* seems to reduce the peripheral insulin resistance in muscle by alleviating *Bahudravasleshma* and also helping to increase the glucose uptake. As *Vamana* also reduces the *Meda*, it must be promoting the function of insulin by reducing the circulating free fatty acids in the body.^[4] *Varunadi grita* having the property of *kapha vata shamaka* and *agni deepana*^[5] whereas *Panchatiktaka grita* having the ingredients which is having *tridosha shamaka* and used in various skin disorders. 777 oil used or *Abhyanga* which is used in various skin disorders as it contains sweta kutaja, narikela etc.

Vata dosha is the most important among *Tridosha* which is responsible to control all the movement. *Apana vayu* is located in *Pakvashaya* and traversed through *Sroni* (pelvis), *Basti* (urinary bladder), *Medhra* (external genital apparatus of each sex) and *Uru* (thigh). It helps in elimination *Samirana* (flatus), *Sakrit* (faeces), *Mutra* (urine), *Sukra* (semen), *Garbha* (fetus), *Arthava* (menstrual fluid). If any derangements in the *Apana vayu* function leads to different *Arthava Dusti* and *Yoni rogas*.^[6]

Asanadi and *Aragwadadi Kashaya* pacifies *kapha dosa* and also used in treatment of *kusta*, *prameha*, *kandu* etc. Whereas *Chandraprabha vati* cures all *yonni rogas* and thus helps in maintaining overall health of women.

CONCLUSION

The most sought-after management of PCOS and Acanthosis nigricans involves multiple drugs like oral, topical and chemicals peels. This includes the metformin treatment which has more side effects in later stages, but in Ayurveda the treatment is planned based on the *Dosa*, *Dhatu* and *Agni* involved in the *Roga* to manage the disease which makes it different than the Allopathic approach. Ayurveda being holistic helps to treat disease in multiple dimensions and it is not restricted to particular system, so this makes Ayurveda a unique and different from other system of medicines. So, in this the patient was having PCOS and Acanthosis nigricans along with irregular menstrual cycle and Blackish brown discoloration cured successfully by *Ayurvedic* line of treatment.

REFERENCES

1. Konar H. D C Dutta's textbook of gynecology. Edition 6, New Delhi: Jaypee brothers medical publishers (p) LTD, 2013; 459.
2. Lee JM, Okumura MJ, Davis MM, Herman WH, Gurney JG. Prevalence and determinants of insulin resistance among U.S. adolescents: a population-based study. *Diabetes Care*, 2006; 29: 2427-32.
3. Jindal N, Joshi NP. Comparative study of Vamana and Virechanakarma in controlling blood sugar levels in diabetes mellitus. *Ayu*, 2013 Jul; 34(3): 263.
4. Shastri K. A. Sushruta Samhita of Sushruta, chikitsa Sthana. Ch.33, Ver.18. Varanasi: Chaukambha Sanskrit Sansthan; Reprint, 2003; 143.
5. Dr. Rashmi Khade, Dr. Apoorva Sangoram, Dr. Asmita Jadhav, Dr. Sunita Gadekar, Dr. Shraddha Bhujbal. Varun (Crataeva nurvala Buch.-Ham.): A review from Bruhatrayi, Kashyap Samhita and Nighantu. *World J Pharm Sci* [Internet], 2018 Aug. 29 [cited 2023

May 24]; 6(9): 163-6. Available from: <https://www.wjpsonline.com/index.php/wjps/article/view/varun-review-bruhatrasi-kashyap-samhita-nighantu>.

6. Shipra Girdhar, Rajesh Kumar Sharma, Dinesh Chandra Sharma. A physiological status of apana vayu. *Int J Health Sci Res.*, 2022; 12(10): 84-89. DOI: <https://doi.org/10.52403/ijhsr.2022101>.