

Traditional Wisdom of Ayurvedic Dietetics Amalgamated with Modern Approaches: A Pivotal Case Study

Case Report

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Abstract

Every country has its own tradition. Similarly India treasures its valued medical tradition of Ayurveda, which is appropriately called as the science of life (Ayu: Life, Veda: knowledge). Ayurveda which has been penned down 3000 years back by Indian sages explicitly elucidates the accurate dietary patterns, therapeutic food combinations and culinary rules for healthy longevity of humans. It doesn't stop here but provides the precise dietary and lifestyle regimens to lead a dignified and valued life. This wisdom when combined with modern nutrition support, proves to be a wonderful tool of therapeutic management.

In this case research paper, the power of certain significant traditional Indian food combinations along with modern nutrition techniques have been elucidated clearly in a particular case of type II diabetes mellitus. It talks about various therapeutic food combinations implemented and significance given to food energies in the case undertaken.

This case research results will definitely prove beneficial to the health care industry, food industry and nutraceutical field as well for better treatment modalities.

Keywords: Ayurveda; Dietetics; Traditional wisdom; Diabetes type II; Therapeutic food

Introduction

Every country treasures its own traditions. Similarly India, a pristine beauty of nature also cherishes its very own and valuable tradition of healing; known as 'Ayurveda'. Ayurveda, as the name means the science of life (Ayu: Life and Veda: Knowledge) [1]. Ayurveda is a *upaveda* of *Atharvaveda*; one of the significant *Vedas* from four *Vedas* namely *Rigveda*, *Samaveda*, *Yajurveda* and *Atharvaveda*. This *upaveda* explicably states various herbs, food ingredients and their combinations used as therapeutic means of healing human disorders in the most natural way. This doesn't end here. *Ayurveda* also describes in detail the ideal system of eating food and ultimately leading a life [2]. Ayurveda is one of the great gifts of the sages of ancient India to the mankind. It is truly a holistic and integral medical system [3].

Similarly modern nutrition science also exhibits immense efficacy for disease treatment and for healthy longevity. Again in today's era modern nutrition science is not limited to calculating nutrients,

measuring calories and other needs of the body but also extends its boundaries by considering the human genetic makeup as well. All these endeavors are for better efficacy of therapeutic dietary modification and overall treatment module. But this personalized nutrition care plan is from modern perspectives of dietetics and exhibits certain lacunas such as technical difficulties while implementing the plan bilaterally.

As discussed above, ancient Indian medicinal science has certain uniqueness which aids in personalized nutrition. This exactly is by considering individual's *prakriti* (as termed in *Sanskrit*) or body constitution. If we as nutrition experts consider this fact and design individual's diet plan, the odds of its efficacy are superior and definite. Unfortunately this novel but most needed perception of diet designing by considering person's *prakriti* is highly neglected in current scenario by dieticians following western knowledge of dietetics. Hence the need arises to sensitize them and the other medical fraternity to reconsider this ancient wisdom of Ayurveda as

primary line of treatment in the health care provision to the needy segment.

A. Ayurveda and Nutrition

Ayurveda specifically stresses that our diet must be according to the design or nature of our bodies. If the nature of the food is in harmony with the nature of our body then only the food ingested will be efficiently processed by our digestive tract. So, to understand the correct diet for oneself, it is important to understand the following:

1. The nature of the person
2. The nature of the food

Understanding the patient's *prakriti* helps nutrition experts to design the food profile that nourishes and maintains that nature and also to recover from the disease.

Ayurveda uses two fundamental concepts to understand a person's nature or *prakriti*.

1. *Tridosha*/ three energetic forces: *Vata*, *Pitta* and *Kapha*
2. *Triguna*/ three qualities: *Raja*, *Satva* and *Tama*

Triguna influence the psyche, which shapes our behavioral traits, while *tridosha* are responsible for the physical characteristics. Every person has a dominant *dosha* and *guna*. Understanding of this is significant. All of these above-mentioned parameters play an important role in designing our diet, which is a major source of nourishment[4].

Thus, in the current case study, this novel approach of designing a diet was implemented and the results obtained were highly positive. This implements that the current approach of treatment is far better than the conventional one where a combinational treatment of Ayurveda and Dietetics is seldom used.

B. Methodology

1. Case

A 54 years old obese (stage I) female presented with 6 years history of both type II DM and stage II hypertension. She markedly exhibited central obesity and long-standing psychological stress owing to family disturbances. She exhibited past history (2 years back) of stage IV breast CA with skeletal secondaries for which she had administered 6 cycles of chemotherapy with carboplatin drug followed by 6 months of oral chemotherapy with cyclophosphamide drug in combination with MTX. Her prognosis for anticancer drugs was perceived as good and currently all her secondaries are inactive and thus maintained only on mega doses of antioxidants. Currently she was stabilized on antihypertensive, hypoglycemic drugs and statins at the time of approach to the nutritionist in OPD sector.

2. Nutritional Treatment

Here primarily her nutrition screening was carried out as per modern dietetics science protocol. This exhibited following results.

Nutrition screening at the time of approach to nutritionist (2nd February 2022)

1. Anthropometry: UBW (Usual body wt): 79 Kg, Ht (Height): 5.5"

IBW (Ideal body wt): 57 kg, ABW (Adjusted body wt): 66 kg

2. Laboratory analysis: HTN: 130/90, Lipid profile: within acceptable range, Fasting BSL: 97, HbA1C: 7, Hb: 8, ALP: 122, CA 13.5: 22
3. Medications: Radifree, Losar 50, Envill M (Vildagliptin 50, Metformin 500- BBF, BD), Rasave A 75, Corcal 500, Becosule, PanD 40, Gabapentin 100
4. H/O diseases/ surgeries: stage IV Breast CA with skeletal secondaries currently inactivated with chemo cycles (IV and oral administration), no surgeries history
5. Allergies: NA
6. Psychosocial history: Spouse passed away 3 years back with prostate CA, currently she lives with her 21 yrs old daughter. She is a homemaker.
7. Physical appearance: broad and heavy body built up, obese stage I, thick, smooth skin and hair, large strained eyes, slow in reactions and physical activities, explains deep sleep with loud snores, cold intolerance, frequent mild URTI
8. Diet history: heavy consumption of carb rich food, less hunger, less consumption of fluids, proteins and fiber. Disrupted meal timings and inactivity, No other habits.

Nutritional Analysis

Anemic, Type II diabetic and stage I hypertensive patient as related to chronic uncontrolled hyperglycemia, stage I obesity and poor dietary and lifestyle practices as evidenced by lab data and nutritional screening. The patient exhibits the dominance of *kapha prakriti* as evidenced by anthropometric data and physiological appearance from nutritional screening.

Dietary Treatment

The patient was undertaken for the treatment of anemia, weight loss, BSL and BP control and avoidance of cancer relapse/ activation.

The treatment as per modern science takes into consideration only the basic and advanced proximate principles of diet but when the treatment is provided with an integral approach it considers the body constitution of the person; and here under consideration is her *kapha* dominant *prakriti*.

The diet for this patient was designed with the aim of restoring iron imbalance, reduction in body weight (excess fat loss), lowering of blood pressure and regularizing her fasting and post prandial BSL.

For this food that help to restore the balance of disrupted *kapha dosha* were prescribed rather than just considering macronutrients and micronutrients needs.

This patient with *kapha prakriti* required less carbohydrate but more proteins and fiber in her diet. Also she needed to regulate her eating patterns by including fasting episodes in a day. Also combining carbohydrates with astringent, pungent and bitter tastes helps to restore *kapha dosha*. Inclusion of ginger, pepper, lemon, citrus fruits helps to melt down excess *kapha*.

Her prescribed dietary pattern included three major meals. Each major meal was designed to provide 400 K calories and 15 gm proteins; together a day's diet provided 1500 Kcal and 45-50 gm good quality plant based proteins. Here carbohydrates were distributed as per her diabetic medication schedule. Her diet was rich in iron loaded foods and vitamin C specific foods. Apart from these macronutrients, her diet was low fat and low sodium and high fiber diet for hypertensive precautions. She was also maintained on 200 ml skimmed *desi* cow's milk daily with a protein supplement (Proteinex DM).

To restore her *kapha* balance, she was provided with a food chart where foods allowed in *kapha* dominance are allowed such as fewer cereals, more pulses, legumes, certain vegetables, fruits, nuts and oilseeds etc.

Some of them among vegetables are leafy vegetables, okra, peppers, tomatoes, beetroot, beet greens, carrot, radish, cauliflower, cabbage, asparagus, bitter gourd, among fruits are berries, apples, citrus fruits, melons, figs, pear, pomegranate etc., among cereals are millets (*jowar*, *bajra*, *ragi*, *rajgeera*) and less of wheat and rice, among pulses are whole and sprouted legumes and all *dals* in liberal amount, among nuts and oilseeds are dried figs, prunes, almonds, pumpkin seeds, cucumber seeds, sesame seeds, flaxseeds, niger seeds and less groundnuts, coconut, among oils are safflower and sunflower oil and cow's *ghee*, among dairy products are cow's skim milk and fresh curd or buttermilk, no *lassi* or sour curds.

Apart from these the patient was asked to strictly follow the *satvik* vegetarian diet as mentioned above. Also, the incorporation of spices and condiments were limited to only *dhana-jeerapd*, pepper *pd* and fresh condiments such as ginger (fresh and dry), coriander, lemon, turmeric, asafetida and garlic, red chilli *pd* and *garammasala* in limited amount. Apart from these certain functional foods were also included such as fennel-cucumber seeds- pumpkin seeds-flax seeds *mukhwas*, *jeera-meera*-mint buttermilk and soaked fenugreek seeds in a specified amounts.

Also, very significantly a primary counseling was conducted on patient to incorporate positive vibrations while cooking and eating food. These vibrations would add purity and healing power in foods for absolute benefit. This remained the main area of focus in counseling the patient.

Physical Activity

Daily 30 minutes of positive meditation, 10 minutes of *Pranayama* and 45 minutes of steady walk on flat surface was suggested. The same routine with periodic caloric modifications was followed by patient for 6 months.

Discussion and Results

After following the above-mentioned diet along with lifestyle changes and thought process change, the results obtained after sixth month were extraordinary and are as under.

Body wt: 62 kg

BSL: fasting 91, PP 110

HbA1C: 5

Hb: 12.50 mmHg

Lipid profile: within normal range

RFT and LFT: within normal range

ALP: 77 IU/L

CA 15.3: 15 U/ml

The above results exhibit excellent blood sugar control, fairly good hemoglobin status, reduced and acceptable body weight, ALP which is an indicator of skeletal malfunctioning is absolutely normal and also breast cancer marker (CA 15.3) is also in normal range.

Weight loss was a sustained one and the chances of regaining weight are minimal on the above-mentioned plan. Also adhering to this routine, the patient exhibited better immunity and tolerance to environmental changes. Her physical expressions were crisp and fresh.

Her recent pet scan also exhibited inactive skeletal secondaries. Currently she weighs 63 kg with all parameters in normal range and now she is sustained only on antihypertensive drugs. She has been taken off the antihypoglycemic therapy and statins treatment now. This is a huge achievement in dietetics' profession.

Concluding Remarks

The above discussed case was the case of chronic grade I obesity accompanied by type II DM and stage I HTN with past history of metastatic breast cancer of which currently the bone metastasis exhibits inactive lesions.

The diet and lifestyle changes were extremely useful in attaining the objectives of the treatment and avoidance of relapse.

This novel and integral perspective of treatment where traditional therapy has been implanted with modern approaches has proven to be a successful and promising therapeutic module in health care provision. This needs more focus and more advanced research is needed to explore further margins of holistic treatment.

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