

Management of Insulin Resistance through Ayurveda: A Case Study

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ABSTRACT

Insulin resistance is developed when cells does not respond to insulin hormone leading to increased blood sugar levels. In Insulin resistance state have impaired glucose metabolism. Insulin resistance is a syndrome leading to a group of diseases like high cholesterol, high blood sugar level, high blood pressure, PCOS, non alcoholic fatty liver disease. The primary cause of insulin resistance is unknown but some theory suggests that obesity is the main cause of increased insulin resistance. Many patients with type 2 diabetes mellitus associated with high blood pressure, dyslipidemia this is due to insulin resistance. And due to high blood pressure and uncontrolled blood sugar levels people will land up in cardiovascular disease, cerebrovascular disease. The prevalence rate of insulin resistance was 15.5% to 46.5%. To diagnose insulin resistance fasting serum insulin test, glucose tolerance testing, hyperinsulinemic euglycemic clamp, double waist size to there respective height is the commonest technique to check insulin resistance. This present article deals with known case of obesity with serum fasting insulin raised posted for *Virechana* after *Virechana* serum fasting insulin reduced and also reduced weight In this patient main culprit is the sedentary lifestyle, obesity which is cause of insulin resistance,

KEYWORDS: TDM2 – Type 2 diabetes mellitus, IR – insulin resistance, *Virechana*

1. INTRODUCTION

The insulin resistance is caused due to sedentary lifestyle. and using excess packed foods where the preservative will be added, beverages, food with high glycemic index this are the main causes of metabolic syndrome, vitamin D deficiency is also associated with insulin resistance. IGFI genes are associated with insulin resistance. Acute and chronic inflammation can cause insulin resistance. Some medications like protease inhibitors, corticosteroids, atypical antipsychotics, growth hormone, cortisol and human placental lactogen are risk factors for insulin resistance. Lack of leptin hormone will cause severe obesity, hepatitis C makes people more prone for insulin resistance. In spite of all this cause by following proper *Dinacharya*, *Rutucharya*, *Nitya Abyanga*, *Nitya Vyayama* to particular extinct can be done. by following this insulin resistance can be prevented. *Panchakarma* treatment followed properly

normalize carbohydrate metabolism, protein metabolism, lipid metabolism which in turn reduces TDM2, CVS, CVD in *Ayurved* insulin resistance may be told as *Ama*, *Avarana* which is the cause of all disease.

CASE STUDY

A male of 51 years, came to Taranath hospital to Out patient department no-1 with *c/o Atimutrata*, *Dourbalya* since 10 days came for *Ayurvedic* management. Patient is not on any type of allopathy medicines. Patient is posted for *Virechana* followed by oral medications.

General examination– central obesity was present, Acanthosis nigricans was present infection no muscle atrophy/foot ulcers. BP – 140/100 mm Hg and pulse – 88/m weight – 106kg, height – 160 cm BMI- 32.7 kg/m²

How to cite this paper: Farida Begum Shaikh | Shwetambari "Management of Insulin Resistance through Ayurveda: A Case Study" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-6 | Issue-2, February 2022, pp.1289-1291, URL: www.ijtsrd.com/papers/ijtsrd49428.pdf



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Central nervous system	Conscious and well oriented
Respiratory system	Normal vesicular breath sound 18/min
Cardiovascular system	S1 S2 heard no murmurs
Per abdomen	Soft and non tender

Nadi was Vatakapha, Jivha was liptata, Kosta was Madhyama, Prakruti was Vatakapha, Dosha was Kapha, Pitta, Vata, Dushya was Meda, Mamsa, Kala was Sharat Rutu, Desha is Jangala Desa, Sara was Meda, Satva is Pravara, Ahara Shakti is Pravara.

This patient was overweight and posted for Virechana with Snehapana Murchita Tila Taila which is given for 4 days (Arohana Krama). Sarvangabyanga with Murchita Tila Taila followed by Patrapinda Sweda and Virechana with tab 2 Abayamodaka Vati with

Reports before treatment and after treatment

AMRUTH DIAGNOSTIC LABORATORY
1st Cross, Gandhi Nagar, BALLARI-583103. (Karnataka State)
Tel: 08392 - 256106

Name: S. B. Channabasavana Gowda
Age: 50 Years Sex: Male Date: 11/11/2021 Page 1 of 1
Ref. by: Dr. Fareeda Begum

Parameters	Results	Reference Range
HAEMATOLOGY		
HB%	10.7 Gms%	M:13 - 18 F: 11.5 - 16
TC	10,400 Cells/Cumm	
DC	P 69%, L 21%, E 07%, M 03%	
PLATELET COUNT	4.57 Lakhs/Cumm	1.4 - 4.4 Lakhs
BIO-CHEMISTRY		
FBS	120.5 mg/dl	70 - 110
PPBS	183.0 mg/dl	80 - 140
HbA1C	7.8 %	< 6 (Non diabetic) 6 - 7 (Near normal glycaemia) < 7 (Goal) 7 - 8 (Good Control) > 8 (Action suggested)
Estimated average glucose HPLC-BIORAD © 19	177.16 mg/dl	
HORMONAL ASSAY		
INSULIN LEVEL (Eclia-Roche)	30.80 µU/ml	(FASTING SAMPLE) 3.00 - 17.00 (RANDOM SAMPLE) 5.00 - 79.0

Ref. No.: 242
Dr. P. Sreedhara Murthy, M.D.S.S., DCP
Pathologist

Effect of intervention on subjective parameters

Before treatment	After treatment	Observation
Atimutrata- 3	Atimutrata-0	Complete relief
Dourbalya - 3	Dourbalya - 0	Complete relief

cold water. No of Vegas – 06 and samarjana krama is followed for 3 days.

Intervention planned

Deepana pacana with panchakola churna
Snehapana with murchita tila taila was given in Arohana Krama for 4 days
sarvangabyanga with Murchita tila taila Followed by Patrapinda sweda
Tablet abayamodaka vati 2 with water
No of vegas 6
Samsarjana karma followed for 3 days.

Oral medications given

Nishamalaki churna 1tsp 3 times a day with hot water before food
Panchatikta Kashaya 15ml 3 times a day with water before food

JYOTSNA HOSPITAL
HEALING HANDS. CARING HEARTS

Test Report

Sample Received On: 29-Nov-2021 13:41 Hrs
Name: Mr. B CHANNA BASAVANA GOWDA 12118262
Ref By: ---
Ref No.: 01144559
Age: 51 Y 0 0 Gender: M
Institution: Jyotsna Hospital (A Unit of Jyotsnareddy Hospital Pvt. Ltd)
Report Issued On: 29-Nov-2021 18:25 Hrs

Investigation	Results	Biological Reference Range	Method
Insulin Fasting (Serum)	23.16 µU/ml	Fasting 3.00 - 24.00 µU/ml	ECLIA

Page: 1 of 1
Tests analyzed and authenticated at Central Lab, Richmond Circle, Bangalore 560027. Ph: 22232370
Terms of Service & Test Report Interpretation applicable as communicated to primary service provider.
CS LABS PRIVATE LIMITED

Effect of intervention on objective parameters

Before treatment	After treatment	Observation
Serum fasting insulin- 30.80 µ/ml	Serum fasting insulin- 23.16µ/ml	50% relief
BMI-32.7kg/m ²	BMI-29.6kg/m ²	30% relief
Weight-106 kg	Weight- 96kg	50% relief

DISCUSSION –Insulin resistance can be merely said as *Medavruta Vata*¹ because due to insulin resistance the fat cells and muscle cells there will be obstruction that is *Avarana* hence this *Avarana* should be cleared by *tikshna virechana* so tablet *Abayamodaka Vati* for *Virechana* which is *Tikshna* in *Karmukata* was chosen. Some other treatments mentioned to reduce the insulin resistance in our classics are *vatakaphahara*, *Medahara*, *Rooksha*², *Ushna Tikshna Basti* with drugs that are *Tikshna*, *Ruksha Udvartana*, intake of *Guduchi*, *Musta*, *Triphala*, administration of *Takrarista*, administration of honey, intake of *Vidanga*, *Nagara*, *Yavaksara*, *Loha Bhasma* with honey and powder of *Yava*, administration of *Shilajatu*, *Agnimantha* juice, administration of honey along with decoction of *Bilvadi Panchamula*. intake of *Priyangu*, *Syamaka*, *Yavaka*, *Yava*, *Kodrava*, *Mudga*, *Kulattha*, *Adhaki* with *Patola*, *Amalaki*, *Madhudaka*, *Arista* which does *Meda*, *Mamsahara*. In body fat cells and muscle cells require insulin to absorb glucose. When these fails to respond then blood sugar level increases. In insulin resistance state fat cells results in reduced uptake of lipids and increased hydrolysis of triglycerides leading to increased fatty acids in blood. And this proinflammatory cytokines, interleukins 1 disrupt normal insulin action causing insulin resistance Here in this case obesity, metabolism is also hampered hence planned for *Virechana*.

Pathya advised –*kodrava*, *chanaka*, *Yava* is soaked in *Triphala Kashaya*³ for 1 night and in morning washed properly and boiled, then further used.

CONCLUSION- As insulin resistance is told as the important cause for many disorders. By following

proper *Dinacharya*, *Rutucharya* and *Ruthu Shodana* is the best treatment modality to reduce the insulin resistance as it does the *margavarana* and does *Srotoshodana*. Due to *Margavarana* the fat metabolism is abnormal forming atherosclerosis hence by *Virechana* the *Pittahara* and *Vatahara* effects are seen and also fat metabolism, protein metabolism will become normal further normalizing insulin resistance.

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