

**MANAGEMENT OF STRESS-INDUCED DIABETES THROUGH AYURVEDIC FORMULATIONS- A CASE STUDY****Amber¹, Sweta Shalini², Mohammad Aamir³, P.C Pathak⁴, V.B Singh⁵**¹2ndyr MD Scholar, Dept. of Kayachikitsa, GACH, ²1st yr MD Scholar, Dept of Kayachikitsa, GACH³2nd yr MD Scholar, Dept of Kayachikitsa, GACH, ⁴Assistant Professor, Dept of Kayachikitsa, GACH⁵Associate Professor/ HOD, Dept of Kayachikitsa, GACH, India**Corresponding Author:** adilaamber24@gmail.com<https://doi.org/10.46607/iamj4610112022>**(Published Online: November 2022)****Open Access**

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Article Received: 31/10/2022 - **Peer Reviewed:** 10/11/2022 - **Accepted for Publication:** 15/11/2022**ABSTRACT**

Diabetes is a debilitating, incurable, and sometimes fatal disease that leaves those afflicted with it unable to live the lives they want. It does not discriminate whether someone is an impoverished refugee or a native of the richest country, diabetes is still diabetes. It is mostly fueled by obesity, an unhealthy lifestyle, and stress. Diabetes is of two types:- Type 1 and Type 2. Type 2 is the most common. At the OPD level, around 15% of the total patients are suffering from diabetes which accounts for a massive number. In order to combat the disease, there are various treatment protocols orals and parenteral in contemporary science. On the other hand, *Ayurveda* has some marvelous herbal formulations mentioned in various texts which is a blessing to mankind. Presented here is a case of 32 yrs. old female patient with c/o increased thirst, appetite, nocturia, and fatigue for 1 month. Taking into consideration the signs and symptoms of the patient; a blood glucose test was advised.

The report stated a rise in blood glucose levels. Keeping in mind the high levels of glucose ayurvedic formulations like cap *Gluset Forte*, cap *Urico-D*, *Aarogyavardhini vati*, *Chandraprabha vati*, *Punarnava Mandur*, *Ashwagandha churna* was prescribed and a significant result was obtained within just a week of treatment.

Keywords: *Ayurveda*, stress-induced diabetes, *Gluset forte*, *Urico-D*, *Chandraprabha vati*, *Aarogyavardhini vati*, *Punarnava Mandur*, *Ashwagandha churna*

INTRODUCTION

In this busy, fast-moving, chaotic life the most important yet neglected aspect is our health.

In the past 2 decades, diseases specially lifestyle disorders have become a part and parcel of our lives. The commonest of all being Diabetes Type 2. The latest shows as global prevalence of 382 million people with diabetes in 2013 expected to rise to 592 million by 2035.¹ Type 2 diabetes is the most common with an estimated global prevalence of 6059 cases/100000 in 2017 expected to rise to 7079 cases/100000 in 2030 making it the 9th leading cause of mortality.² Even India is not lagging behind in this race. An estimate shows 77 million cases in 2019 expected to rise to 134 million by 2045,³ which is indeed a huge number and alarming at the same time. The major causes behind the disease are obesity, a sedentary lifestyle, family history, and stress.⁴ Stress is the commonest among all the causes of diabetes, especially in young adults and middle-aged. Stress has long been shown to have major effects on metabolic activity. Stress stimulates the release of various hormones which can result in elevated blood glucose levels.⁵ What happens during stress is that when the brain senses danger, it releases stress hormone like cortisone, adrenaline, or epinephrine that prepares the body for action. As a result, blood sugar rises to give extra fluid, and this gives a burst of energy that ends when danger goes away. But when stress lasts for a long time and the body isn't given the time to rest, the brain keeps producing these hormones which fur-

ther keep elevating the blood glucose level which makes a person diabetic and even developing insulin resistance.⁶ It's

unfortunate that despite knowing so many adverse effects of stress, we somehow are unable to get rid of it, not because we don't want to get rid of it but because it seems quite impractical in today's helter-skelter lifestyle. Moreover, contemporary treatment protocols basically target only the symptoms and not the cause. And there comes the role of *ayurveda* which is supposed to target the cause and effect will automatically get rid of.

Case report:-

A 32 yrs. old female patient with CRN -10064 visited our OPD of Kayachikitsa, GACH, Patna with chief complaints of fatigue, headache, disturbed sleep, nocturia, increase thirst, appetite, and weakness. Keeping in mind the signs and symptoms of the patient, she was advised to get her blood sugar fasting and post-prandial done. The reports suggested high blood sugar in both fasting and PP. While going through the detailed history, she told us that for the past 2 months she has been under immense stress regarding her transfer to the job. Since then, she has been suffering from these symptoms. Before that, she was absolutely fine and had no family history of DM2. Considering all these symptoms and events, she was diagnosed with stress-induced DM2.

Treatment:-

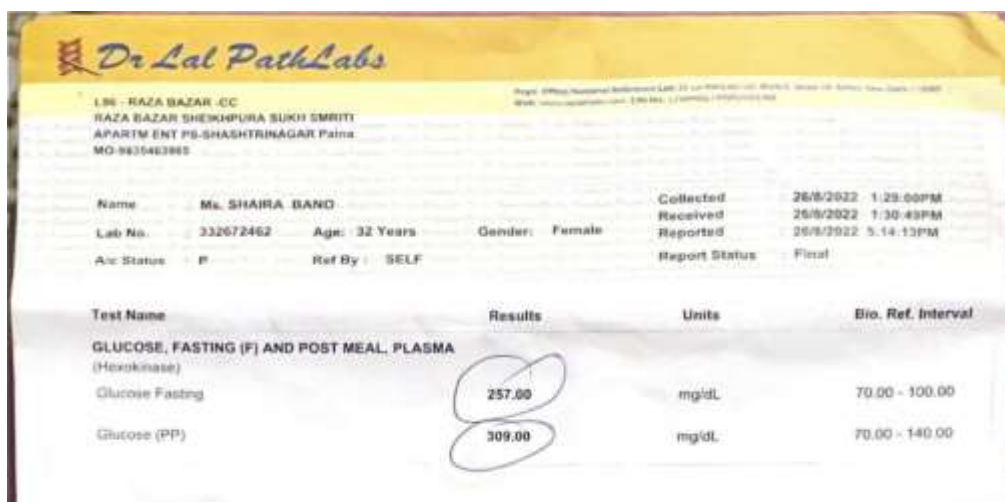
1) Cap *Gluset Forte*- 2 cap *Cap Urico-D* - 2 cap
BD

2) *Aarogyavardhini vati*- 1 tab BD 3)*Chandraprabha vati* - 1 tab
Punarnava Mandur - 250 mg

BD

4)*Ashwagandha churna*- 3gm BD

Results:-
Before



Test Name	Results	Units	Bro. Ref. Interval
GLUCOSE, FASTING (F) AND POST MEAL, PLASMA (Hexokinase)			
Glucose Fasting	257.00	mg/dL	70.00 - 100.00
Glucose (PP)	309.00	mg/dL	70.00 - 140.00

After



Test Name	Results	Units	Bro. Ref. Interval
GLUCOSE, FASTING (F) AND POST MEAL, PLASMA (Hexokinase)			
Glucose Fasting	131.00	mg/dL	70.00 - 100.00
Glucose (PP)	140.00	mg/dL	70.00 - 140.00

Note

- The diagnosis of Diabetes requires a fasting plasma glucose of > or = 126 mg/dL and/or a random / 2 hr post glucose value of > or = 200 mg/dL on at least 2 occasions
- Very low glucose levels cause severe CNS dysfunction
- Very high glucose levels (>450 mg/dL in adults) may result in Diabetic Ketoacidosis & is considered critical

DISCUSSION

The treatment protocol adopted was in accordance with the patient's signs and symptoms as well as the cause of the disease i.e stress.

Gluset forte:- It is composed of *Jambu beej*, *Gudmar*, and *vijayar*. All these ingredients are marvelous blood sugar regulators.⁷ *Jamun* is sweet, sour, and astringent in taste and increases *vata* and balances *kapha* and *pitta dosha*.⁸ *Jambu* contains jambolin and Jambosine which promote the slow release of glucose in the blood stream and further boost insulin production which aids in type 2 DM management.⁹ *Gudmar* stimulates the secretion of

insulin, rejuvenates the process of generating β - cells and produces insulin, and increases the utilization of glucose.¹⁰ *Vijaysar* has a good effect in curbing diabetes by blocking sugar binding sites and hence not allowing the sugar molecules to accumulate in the body.¹¹

Urico-D:- The major ingredient of *Urico-D* is *Gomutra*. *Gomutra* contains volatile fatty acids like acetic acid, 2-propenyl ester, acetic acid methyl ester, propyl ester, quinoline, etc which acts as an antioxidant. The antioxidant potential contributes to the antihyperglycemic effect by preventing the formation of free radicals which causes damage to the β -cells of

the pancreas.¹²

Aarogyavardhini vati:- Its main content is *Kutaki* which is a potent *pitta rechaka* that helps in bile secretion.¹³ It has been found in research that bile acids could activate certain receptors

such as farnesoid X receptors and the transmembrane G proteins coupled receptor 5 which can reduce fat tissue inflammation and insulin resistance in obesity-linked diabetes.¹⁴

Chandraprabha vati has got a remarkable effect in the mitigation of *prameha* which correlates in many ways with DM2 and is also exhibited in both glucose and lipid-lowering activates in experimental studies.¹⁵

Punarnava Mandur:- according to the journal of pharmacology and phytochemistry, punarnava is known to correct the digestive system which is an important aspect for diabetics. A healthy digestive system will ensure stable blood sugar levels. *Punarnava* tends to increase plasma insulin levels which further helps in managing diabetes well.¹⁶

Ashwagandha churna:- A study in the Indian journal of pharmacology stated, "A clinical trial in patients of non-insulin-dependent DM with hypercholesterolemia reported a decrease in blood glucose with *Withania somnifera* being comparable to that of an oral hypoglycemic." Moreover, consuming *Ashwagandha* helps reduce the production of the hormone Cortisol i.e stress hormone in the body thus reducing anxiety levels and stress.¹⁷

CONCLUSION

From the above discussions, it can be conferred that *ayurvedic* formulations have a marvelous effect on stress-induced diabetes. It has the potential to reduce the signs and symptoms of diabetes without causing any side effects. But this is only a single case study.

In order to establish this as a fact, the trial should be conducted on a larger sample size.

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