



REVIEW ARTICLE

AWARENESS AND ATTITUDE OF PATIENTS TOWARDS AYUSH THERAPIES FOR DIABETES SVKM'S NMIMS

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ABSTRACT

India is the diabetes capital of world. The current healthcare infrastructure is unable to cope with the increasing influx of diabetes patients. Traditional therapies such as Ayurveda, Unani, Siddha and homeopathy, commonly known as AYUSH, have been used in diabetes treatment for centuries. This study attempts to understand the awareness and attitude of patients towards AYUSH therapies for diabetes and to understand the hurdles that are preventing AYUSH from becoming a mainstream therapy for Diabetes. A survey of patients was conducted to understand the perspective of this group. It was observed that Allopathy is the first choice of treatment by patients. It was also observed that awareness regarding AYUSH therapies is low amongst the study participants. Lack of scientific evidence is a major constraint for AYUSH therapies.

INTRODUCTION

Diabetes is a major concern for India, also referred to as the diabetes capital of the world. As the number of diabetes patients continues to increase, we feel that the current healthcare infrastructure is not compatible to deal with the increased influx of diabetic patients and thus will contribute negatively in this already increasing menace. Traditional systems of medicine which include Ayurveda, Unani, Siddha and Homeopathy (commonly referred to as AYUSH) have been successfully treating Diabetes for centuries (Kapur *et al.*, 2016). However, in the present times, the only preferred way for treatment of diabetes remains allopathy. With the healthcare infrastructure not in place to curb Diabetes, we propose to bring back the use of AYUSH therapies for better outcomes (Nanditha *et al.*, 2016; Anjana *et al.*, 2012; Ramachandran *et al.*, 1988). In this study, we try to understand the perception of patients towards AYUSH therapies for diabetes and we recommend how AYUSH therapies can be made main stage therapies for treatment of diabetes, at par with allopathy.

The major goals of the research study are

- To understand the level of awareness about AYUSH therapies for diabetes treatment.

- To understand patient's attitude towards AYUSH therapies in diabetes and to find out if there is a unity of mind.
- To understand the hurdles for AYUSH therapies from becoming mainstream therapy for diabetes.

LITERATURE REVIEW

Diabetes is one of the most prevalent diseases and has become a global health challenge of this century. People suffering from diabetes have been increasing as a result economic burden is also increasing on patient and society at large. The increasing disease burden is mainly due to type 2 diabetes which is more prevalent among patients. The International Diabetes Federation has estimated that globally there are 415 million people with diabetes in 2015 and is predicted to increase to 642 million by 2040 (Ramachandran *et al.*, 1988; Ramachandran *et al.*, 1992; Ramachandran *et al.*, 1997; Ramachandran *et al.*, 2001). In a recently published report by Indian Council of Medical Research (ICMR-INDIAB), a study was conducted in four different zones of rural and urban India which showed that the prevalence of diabetes and prediabetes has increased. The inter-state variations in prevalence, ranging from 4.3% in Bihar, 10.4% in Tamil Nadu and 13.6% in Chandigarh (Ramachandran *et al.*, 2008). Epidemiological studies carried out by India Diabetes Research Foundation in Southern Indian population showed an increase in prevalence of diabetes and prediabetes in city and rural population. The diabetes prevalence was 5% in 1985, 8.2% in 1989, 11.6% in 1995, 13.9% in 2000 and 18.6% in 2006 in City.

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The prevalence of diabetes in rural population was 2.2% in 1989, 5.9% in 2000, 6.4% in 2003 and 9.2% in 2006 (Ramachandran *et al.*, 1999). Prevalence of diabetes among children is also increasing at the rate of 3% (Type 1) every year. In 2015 the number of children worldwide with type 1 diabetes exceeded half a million for the first time. There are 70,000 children suffering from this condition alone in India, making it second largest in the world after USA. Gestational diabetes poses higher risk among women and long-term consequences for the offspring (Das, 2006; Ali *et al.*, 2009; Jitendra Singh, 2013; Grover *et al.*, 2005; Ramachandran *et al.*, 2007; Kapur, 2007). Ayush82 is formulated and clinically proven by Central Council Research in Ayurveda Sciences, M/o of AYUSH, GOI for diabetic care. Recently Right Sugar (Chaturbhuj Pharmaceutical), IME-9 (Kudos Ayurveda) and BGR-34 (AIMIL Pharmaceutical) have drawn the attention of many diabetic consumers as these products are developed from scientific organizations of government and highlighted in electronic and print media. IME-9 (Kudos Ayurveda) developed from Ayush 82 of Central Council Research in Ayurveda Sciences, M/o of AYUSH, GOI. Most of the patients consuming IME-9 attend Ayurvedic hospitals and clinics for evaluation of their blood sugar level to know the efficacy of the drug and for consultation. Therefore, an initiative was taken to analyse the safety and efficacy of IME-9 in newly diagnosed diabetic patients taking an IME-9 tablet or have a primary prescription of the same. IME-9 was able to reduce (96%) the blood glucose of all newly diagnosed cases, whereas glycosylated haemoglobin level was reduced in all newly diagnosed cases except in one. Total 12 (48%) patients have shown the improvement of blood glucose and glycosylated haemoglobin (up to 7). It is also observed that in three cases blood glucose level was increased after 2 weeks of treatment and significant reduction of blood glucose was found after the 8th week. So IME-9 may be the first line choice of herbal treatment of newly diagnosed cases along with a change in lifestyle (Jitendra Singh, 2013).

Test for Oral Glucose Tolerance

- The person who is going to be tested must be on a normal diet for minimum 3 days before the test.
- The test should be done after an overnight fast of 8-10 hours and comprises of two blood samples: before meal and 2 hours after meal.
- The person should be resting and refrain from smoking in between the two sample collection. (<http://mdiabetes.nhp.gov.in/>). Retesting Criteria for Diabetes in Asymptomatic High Risk Individuals
- Undiagnosed high risk individuals with normal test – retest yearly or once in 2 years.
- Impaired Glucose Tolerance, Impaired fasting glucose (Dey, 2016). Testing criteria for Type – 2 Diabetes in Children and Adolescents Overweight (weight.120% of ideal body weight) plus any of the following risk factors:
- Family history of type-2 diabetes in first or second degree relative.
- Signs of insulin resistance or conditions which are associated with insulin resistance (Acanthosis nigricans, hypertension, dyslipidemia or PCOS) (<http://pib.nic.in/release/release.asp?relid=34389>; WHO, 2009; Bjork *et al.*, 2003; Agarwal, 2013).

MATERIALS AND METHODS

Modified Usage and Attitude study to understand Awareness and Attitude: A usage and attitude (UandA) study involves research which aims to 'understand a market' and identify growth opportunities by answering questions on whom to target, with what and how. This fundamental type of study is useful for identifying the linkages among usage behaviours and opinions. UandA's typically are done in a very customised way and, depending on the business objectives, generally include some or all of the following:

- 'Market sizing' (e.g. category penetration, usage frequency, etc.)
- General category understanding' (e.g. who uses, what/when/where /how, category dissatisfactions, etc.)
- Understanding brands (brand penetration, brand perceptions, brand choice drivers, etc.)
- Information for targeting (e.g. attitudinal or behavioural segmentations) (Malathy *et al.*, 2011).

This study was designed to identify the general category understanding of AYUSH therapies for diabetes. The patient study was carried out online only.

Participants: Total number of people surveyed 259, of which 130 were diabetes patients or had diabetes patients in their families. The entire study was confidential and thus no names/identification of participants was taken.

RESULTS

Effectiveness: In the above data, the p is less than 0.05, there by indicating that the data is statistically significant at 95% confidence level. The above data also indicates that the AYUSH therapies and Allopathy treatment for Diabetes are somewhat affordable as per patient.

Conclusion

In total, 259 participants representing general public of which 130 were diabetes patients or had a diabetes patient in their family were surveyed.

- For effectiveness, awareness, least complexity of treatment and trust Allopathy scores highest followed by Ayurveda and then Homeopathy. Siddha and Unani have very low scores and usage and awareness of these is very low.
- In terms of Safety, the general perception is that Ayurveda is safest followed by Allo pathy and then homeopathy. This is the only are a where Ayurveda leads compared to Allopathy.
- Almost 43.6% of the respondents believe that AYUSH therapies can be used for treatment of Diabetes which is a substantial chunk. Yet only 22.7% of the respondents have used AYUSH therapies for treatment of diabetes.
- However, there is little to no awareness about any government initiatives for AYUSH therapies for treating Diabetes.
- Through a T-test for affordability, it was found that both AYUSH therapies and Allopathy have similar affordability.

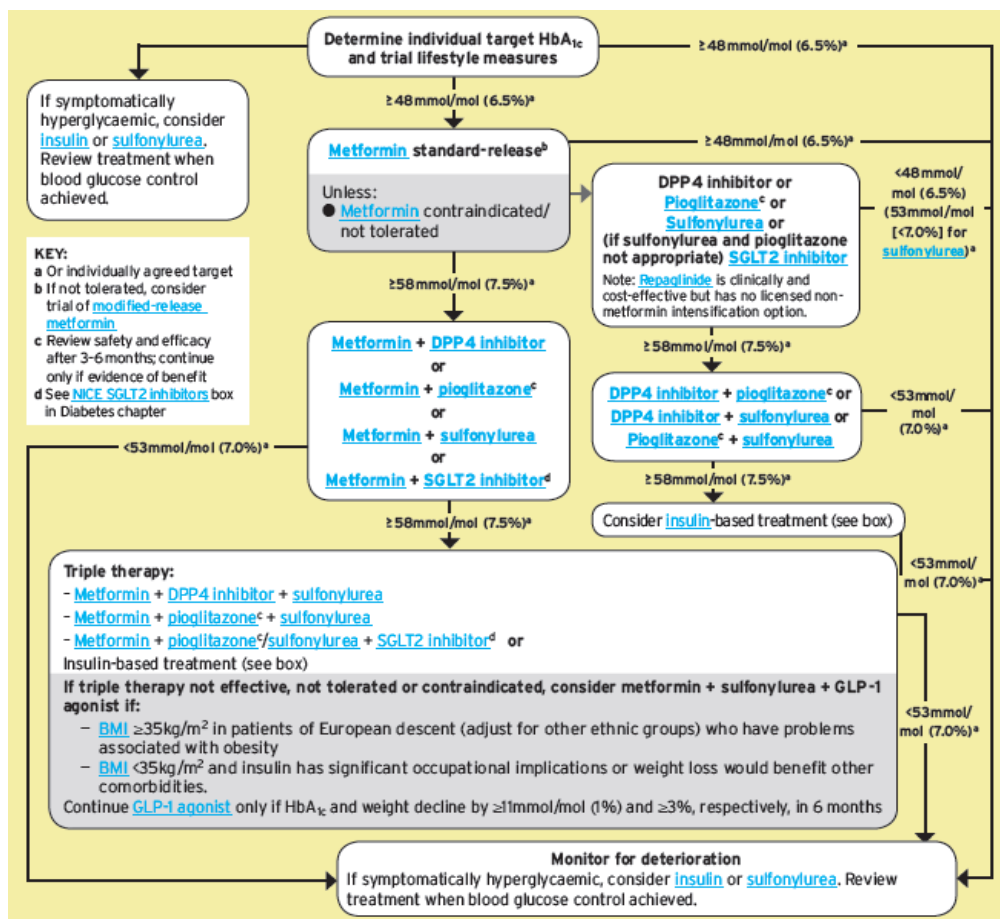


Figure no 1. Management of Type 2 diabetes (NICE guidelines)

Effectiveness

Table no 1. Cumulative frequency of effectiveness of AYUSH

	Unani	Ayurveda	Homeopathy	Allopathy	Siddha
Not effective	33.8	9	15	0.8	30.8
Less effective	53.4	22.6	33.1	7.5	51.1
Neutral	94	57.1	73.7	35.3	94
Effective	97.7	89.5	97	60.2	97.7
Highly effective	100	100	100	100	100

Awareness

Table no 2. Cumulative frequency of awareness of AYUSH

	Unani	Ayurveda	Homeopathy	Siddha	Allopathy
Not at all aware	74.5	21.2	34.7	72.6	10.4
Slightly aware	86.5	45.6	64.9	87.6	22
Somewhat aware	96.9	76.8	85.7	96.1	57.1
Moderately aware	98.8	92.3	93.1	97.7	73.4
Extremely aware	100	100	100	100	100

Complication

Table no 3. Cumulative frequency of Complications of AYUSH

	Unani	Ayurveda	Homeopathy	Siddha	Allopathy
Highly complicated	31.6	12	15.8	27.1	7.5
Moderately complicated	51.1	30.1	39.1	49.6	21.1
Neutral	89.5	70.7	72.2	88	51.9
Slightly complicated	95.5	83.5	87.2	95.5	74.4
Least complicated	100	100	100	100	100

Trust

Table no 4. Cumulative frequency of Trust of AYUSH

	Unani	Ayurveda	Homeopathy	Siddha	Allopathy
Low trust	85	22	41	84	7
Medium Trust	27	33	38	28	16
Neutral	16	41	34	15	45
Trust	3	28	16	3	25
High Trust	2	9	4	3	40

Table 5. Cumulative frequency of Safety of AYUSH

	Unani	Ayurveda	Homeopathy	Siddha	Allopathy
Unsafe	19.5	3.8	9	19.5	2.3
Unsafe but acceptable	32.3	17.3	21.8	30.8	26.3
Neutral	88.7	54.1	66.2	86.5	57.1
Safe	97.7	77.4	87.2	97	88.7
Highly safe	100	100	100	100	100

T test for Affordability

	One-Sample Statistics			
	N	Mean	Std. Deviation	Std. Error Mean
AYUSH affordability	123	3.2276	1.10745	0.09986
Allopathy affordability	129	2.9845	0.98413	0.08665

One-Sample Test						
Test Value = 4						
95% Confidence Interval of the Difference						
	t	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
AYUSH affordability	-7.735	122	0	-0.77236	-0.97	-0.5747
Allopathy affordability	-11.72	128	0	-1.0155	-1.187	-0.8441

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