



RESEARCH ARTICLE

AYURTECH: DIGITAL SOLUTIONS FOR DIABETES REVERSAL - A CASE STUDY

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Manuscript Info

Manuscript History

Received: 05 June 2025

Final Accepted: 07 July 2025

Published: August 2025

Key words:-

Type 2 Diabetes, Ayurveda, Digital Health, Lifestyle Medicine, Diabetes Remission, GTT, Integrative Protocol

Abstract

This case study presents the successful remission of Type 2 Diabetes Mellitus (T2DM) and hypertension in a 38-year-old male. Here we are using a hybrid model that integrates classical Ayurvedic therapies with digital lifestyle interventions. The patient followed a structured 6-month protocol involving personalized diet, herbal support, physical activity, mind-body practices, and a 5-day medication-free residential Ayurvedic camp. By July 2025, clinical remission was achieved: hba1c reduced to 5.5%, weight loss of 7.95 kg, cessation of all medications, and a post-program glucose tolerance test (GTT) confirmed normal glucose metabolism. This case illustrates the potential of combining Ayurveda with digital therapeutics to deliver predictive, preventive, and personalized care. Key to success was low-cost, patient-centred counselling strategies rooted in self-awareness and behavioural change.

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Introduction:-

T2DM is widely perceived as a chronic, progressive disease. However, mounting evidence supports the potential for sustained remission through intensive lifestyle modification.^{1,2} Ayurveda, India's ancient system of medicine emphasizes holistic and individualized approaches- offering promising pathways for reversing chronic metabolic conditions. This report presents a digitally supported, integrative care model that led to confirmed T2DM and hypertension remission in a middle-aged male, highlighting the synergy between traditional Ayurvedic wisdom and modern digital tools.

Case Presentation:

Patient Details:

- **Age/Sex:** 38-year-old male
- **Medical History:** Diagnosed with T2DM (2016), hypertension, mild hyperlipidaemia
- **Allopathic Medication (January 2025):**
 - Tab. Vildagliptin/Metformin 50/1000 mg – After lunch
 - Tab. Glycomet Trio Forte – Before breakfast
 - Tab. Telmisartan 40 mg – After breakfast
 - Tab. Ecosprin AV 75/20 mg – After dinner

Baseline Clinical Parameters (January 2025):

- HbA1c: 6.7%
- Fasting Glucose: 114–127 mg/dL

- Postprandial Glucose: 160–170 mg/dL
- Weight: 70 kg
- Blood Pressure: 130/85 mmHg (on Rx)
- Pulse: 78–82 bpm

Material and Methods:-

simple Random case study:

Intervention Protocol (Jan – July 2025):

Phase 1: Digital Lifestyle Care (Months 1–3):

- **Diet:** Low-glycaemic index, dairy-free, sugar-free whole food plan
- **Herbal Support:** Daily Gandharva Haritaki (first month), amla, turmeric, and cinnamon infusions
- **Exercise:** Walking, jogging, recreational sports, lymphatic movement
- **Mind-Body Practices:** Pranayama, emotional journaling, digital coaching, stress-release protocols
- **Medication Management:** Gradual tapering guided by real-time glucose data

Phase 2: Detoxification and Intermittent Fasting (Months 4–5)

- **Ayurvedic Cleansing:** Classical Kala Basti⁽¹²⁾ (14 days regular + 14 days intermittent) -(Charak Samhita)
- **Fasting:** Weekly intermittent fasting; seasonal detox foods
- **Monitoring:** Medication stopped by late April; vitals tracked digitally

Phase 3: Residential Ayurvedic Camp (Month 6)

- **Duration:** 5-day immersive program
- **Therapies:** Panchakarma -inspired cleansing, yoga Nidra, therapeutic massage
- **Education:** Lifestyle counselling, stress mastery, community healing practices
- **Clinical Oversight:** Daily glucose, BP, and vital monitoring

Results:-

Interim Assessment – 13 May 2025

Table 1 showing Interim Assessment

Parameter	Value
Fasting Glucose (mg/dL)	113
Postprandial Glucose	136
HbA1c (%)	5.7
Avg Glucose (mg/dL)	117
Weight (kg)	62.7
BP (mmHg)	114/66
Medications	0

Interpretation: Markers consistent with diabetes remission off medication.

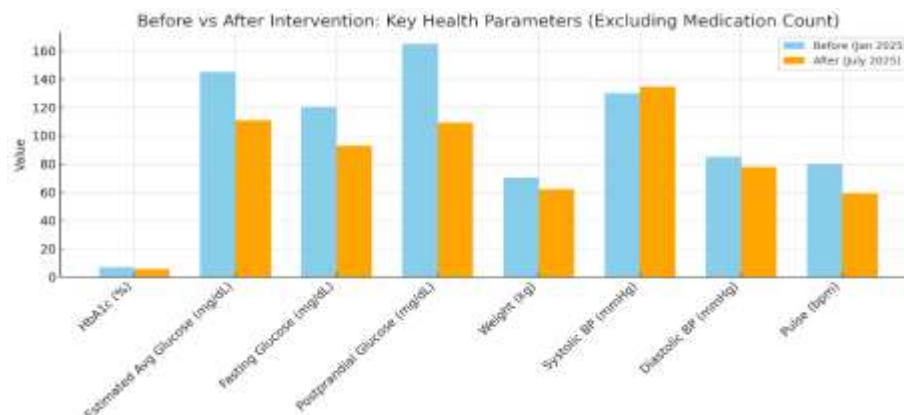
Pre- and Post-Intervention Comparison**Table 2 : showing Pre- and Post-Intervention Comparison**

Parameter	Jan 2025	July 2025
HbA1c (%)	6.7	5.5
Estimated Avg Glucose (mg/dL)	~145	111
Fasting Glucose (mg/dL)	114–127	93
Postprandial Glucose (mg/dL)	160–170	109
Weight (kg)	70	62.05
BP (mmHg)	130/85	135/78
Pulse (bpm)	78–82	59
Allopathic Medications	4	0

Oral Glucose Tolerance Test (GTT) – 31 July 2025**Table 3 : showing Oral Glucose Tolerance Test (GTT)**

Time Post-Glucose (75g)	Glucose (mg/dL)
Fasting	102
2 Hours	76
2.5 Hours	114
3 Hours	93

Interpretation: Normal glucose response confirming biochemical remission.

Statistical Chart:**Figure 1 : showing Before and after intervention: key health parameter**

Discussion:-

This case exemplifies a safe, low-cost, and scalable model for the remission of T2DM and hypertension using integrative methods. The reversal was clinically validated using HbA1c, self-monitored glucose trends, and a GTT—consistent with ADA/EASD remission definitions.^{3,4}

The intervention was anchored in Ayurvedic fundamentals:

- **Agni Deepana** (metabolic restoration)
- **Ama Pachana** (toxin removal)
- **Dosha Samya** (bioenergetic harmony)

These were enhanced via digital adherence tools and real-time patient feedback. Crucially, the emotional and cognitive components—through journaling, stress relief practices, and group support-enabled deep behaviour transformation. This aligns with recent literature calling for lifestyle-first paradigms in chronic disease care.^{5,6,7}

Conclusion:-

This case highlights the potential for long-term T2DM remission using a cost-effective, integrative model based on Ayurveda and digital therapeutics. The approach is replicable and relevant for low-resource settings, warranting larger trials and public health attention.

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