

EFFECT OF URANIUM NITRICUM IN LM POTENCIES ON REDUCTION IN CARDIOVASCULAR RISK AMONG PATIENT WITH TYPE 2 DIABETES MELLITUS

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ABSTRACT

Objectives: The present study was carried to determine the reduction in cardiovascular (CV) risk among the patients with type 2 diabetes mellitus (T2DM) after treatment with homeopathic uranium nitricum in LM potencies on the top of unstable background antidiabetic and lipid-modifying therapy.

Methods: This study was open-label, placebo-controlled, parallel arm phase 3 study, stratified according to glycated hemoglobin values (<7.0, >7.0). Male and female patients with T2DM (>18 years old) were included in this study from Bharati Vidyapeeth Homeopathic Hospital, Pune. The CV risk was assessed through the United Kingdom Prospective Diabetes Study (UKPDS) search engine. This study was conducted during October 2014–December 2015.

Results: Female prevalence was more (52.94%) than male (47.05%) in the current study. The average body mass index of the population was 26.98 (24.9, 29.1). The significant CV risk reduction ($p < 0.05$) after treatment with uranium nitricum in LM potencies was observed for non-fatal and fatal coronary heart disease $p <$ among the patients with patients with T2DM.

Conclusion: The homeopathic formulation of uranium nitricum in LM potencies significantly reduces the CV risk when assessed through UKPDS search engine in the patients with T2DM on the background of unstable antidiabetic therapy and LMT.

Keywords: Diabetes mellitus, Type 2, Homeopathy, Cardiovascular risk, United Kingdom Prospective Diabetes Study, Uranium nitricum.

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INTRODUCTION

It's now well identified that type 2 diabetes mellitus (T2DM) is related to increased cardiovascular (CV) morbidity and mortality [1-5]. Patients with diabetes have a decrease in life expectancy of around 4–8 years, compared with those without diabetes [6,7]. The community health impact of cardiovascular disease (CVD) in patients with diabetes is already massive and is ever-increasing [8,9]. It has long been known to be a sovereign risk factor for CVD [10]. A personalized approach to CV risk evaluation and management is necessary. Scientifically and carefully chosen homeopathic medicines offer a greater opportunity to reduce the burden of CVD [11,12]. The present investigation was carried to demonstrate the effect homeopathic medicine uranium nitricum in LM potencies in reducing CVD risk in very high-risk patients with diabetes. The United Kingdom Prospective Diabetes Study (UKPDS) was used as an estimation tool for this study [8,13,14].

METHODS

Study design and endpoint

The original study was to investigate the effects of uranium nitricum LM potency on blood sugar level. This was the subset of the original study specially objectivised to include high CV risk patients among patients with T2DM. This study was conducted during September 2014–September 2017 at Bharati Vidyapeeth Deemed University Homeopathic Medical College, Pune. Previously patients treated only with uranium nitricum were eligible to enroll in this study. In addition, patients having high blood sugar at baseline with a longer history of DM and willing to check lipid profile voluntarily at baseline and the end of the study. The patients who were unstable on lipid-modifying therapy were excluded from the study.

The study was conducted according to the Declaration of Helsinki [15,16]; the protocol was reviewed and approved by the Institutional Review Board/independent ethics committee. All patients provided signed and written informed consent.

The study was open-labeled, randomized, parallel group, and phase 3 study stratified according to glycated hemoglobin (HbA1c) values (<7.0, >7.0). Male and female patients of >18 years old were included in this study receiving background unstable antidiabetic and lipid-modifying therapy. The endpoint of this substudy was to evaluate the change in CV risk among patients with diabetes after homeopathic treatment in various LM potencies with the help of UKPDS risk engine. The homeopathic remedy was selected through RADAR 10.0 [17].

Data analysis

Data were expressed as average (min and max). A 10-year risk with 95% confidence interval was analyzed using student paired t-test. Analysis of statistical data was performed using Microsoft Office Excel 2010 and GraphPad Prism 6.0 (GraphPad, San Diego, USA). $p < 0.05$ was considered as statistically significant as compared to one another.

RESULTS

Baseline and demographic characteristics of respondents

All the patients were of South Asian ethnicity with higher female prevalence. Majority of patients were non-smokers and diagnosed with neuropathy. The demographic and baseline characteristics are described in Table 1.

Risk estimates in individuals with T2DM diabetes not known to have heart disease

The overall significant risk reduction after uranium nitricum was observed in non-fatal and fatal coronary heart disease ($p < 0.05$). In

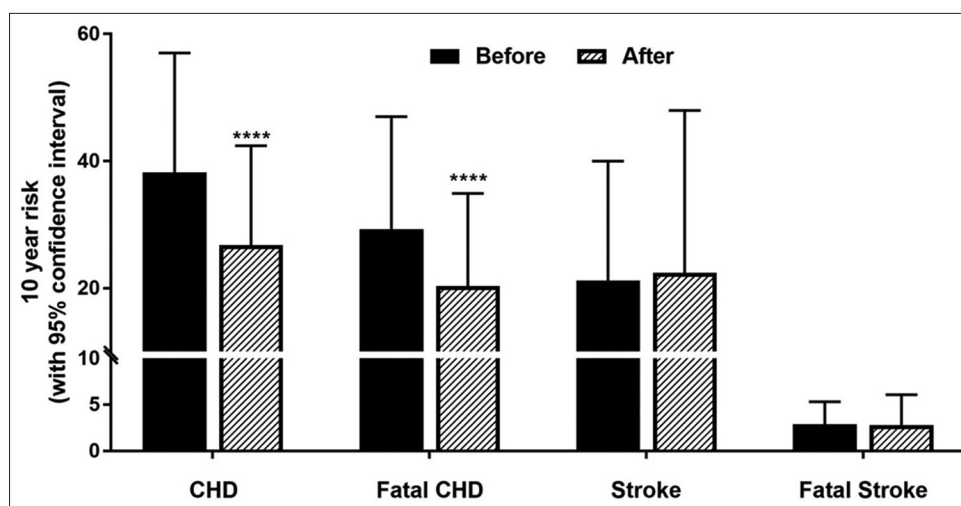


Fig. 1: 10-year risk after uranium nitricum treatment in LM potencies inpatients' with type 2 diabetes mellitus. Data are expressed as a mean±standard deviation and analyzed by student pair t-test. ****p<0.05 as compared to one another

Table 1: Baseline and demographic characteristics of patients receiving homeopathic treatment in various LM potencies

Baseline characteristics	% and average (Min, max)
Sex	M: 47.05 F: 52.94
Religion	H: 64.70 M: 29.41 C: 5.88
Smoking	Smokers: 35.29 Non-smokers: 64.70
Complications of diabetes	Neuropathy: 58.82 Nephropathy: 23.52 Retinopathy: 11.7 None: 5.88
Age	64.64 (50, 82)
BMI	26.98 (24.9, 29.1)
Duration since diabetes diagnosis	13.29 (10, 20)
Duration since insulin treatment	6.47 (2, 11)
SBP	130.70 (102, 150)
DBP	89.17 (68, 100)
HbA1c	7.77 (7.2, 8.6)
TC	274.05 (240, 325)
HDL	41.47 (34, 52)

BMI: Body mass index, SBP: Systolic blood pressure, DBP: Diastolic blood pressure, HbA1c: Glycated hemoglobin, TC: Total cholesterol, HDL: High-density lipoproteins

general, no such difference was detected in the risk reduction for stroke and fatal stroke. The details of 10-year risk (with 95%, confidence interval) for coronary heart disease, fatal coronary artery disease, stroke, and fatal stroke are explained in Fig. 1.

DISCUSSION

The present investigation was designed to evaluate the effects of uranium nitricum on overall risk reduction in fatal and non-fatal coronary heart disease (CHD) and stroke, respectively. It was a subset analysis of original uranium nitricum study on blood sugar level. The patients with high blood sugar at baseline and willing to perform lipid investigations were specifically included in this substudy for further evaluation of CV risk with the help of UKPDS risk engine [8]. The patients were selected only from uranium nitricum treated group; hence, the possibility of high selection bias cannot be ruled out.

The average age and BMI of the population were 64.64 (50, 82) and 26.98 (24.9, 29.1), respectively, with higher female preponderance.

Average blood pressure of the subgroup was systolic blood pressure 130.70 (102, 150) and diastolic blood pressure 89.17 (68, 100). The average HbA1c was 7.77 (7.2, 8.6), whereas total cholesterol and high-density lipoproteins-C were 274.05 (240, 325) and 41.47 (34, 52), respectively.

In general, reduction in the 10-year risk was found significant ($p < 0.05$) among CHD and fatal CHD contrary to fatal and non-fatal stroke. It shows uranium nitricum in LM potencies had significantly reduced the CV risk as compared to baseline on the top of background LMT and conventional antidiabetic therapy.

CONCLUSION

Uranium nitricum in LM potencies on the top of background LMT and antidiabetic therapy significantly reduces the CV risk when evaluated through UKPDS risk engine among patients with T2DM.

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AUTHOR'S CONTRIBUTION

Anwar Ansari: Data collection, Sanjeev Dole: Study design, Anita Patil: Drafting of manuscript, Arun Jadhav: Analysis of data. The manuscript was written through contributions of all authors. All authors have approved the final version of the manuscript.

CONFLICTS OF INTEREST

The authors declare no competing financial interests.

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