

Efficacy of hydroxychloroquine in patients with type 2 diabetes mellitus (T2DM) inadequately controlled on triple drug therapy as an add on



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Biography

Shaibal Guha did his MD in internal medicine from PMCH, India, and later joined as senior resident (Internal Medicine & Critical Care) at escorts hospital, faridabad. He thereafter joined bihar's premier health-care institution - the indira gandhi institute of medical sciences in patna, as registrar (Internal Medicine), where he worked for four years. Subsequently, in the year 2003, shaibal guha set up his own consultancy, positive health centre, which now has two branches in patna, India.

Abstract

Aim: To evaluate the efficacy of hydroxychloroquine 400mg as a fourth therapeutic agent in type 2 diabetes mellitus (T2DM) patients with poorly controlled blood glucose despite receiving an optimum dose of three oral antidiabetic drugs (OAD).

Methods: Patients treated with hydroxychloroquine 400 mg as an add-on drug, on those patients who were poorly controlled despite optimum doses of three OADs, metformin, sulfonylureas, pioglitazone or alpha-glucosidase inhibitors were included in this analysis. Total 131 patients with ≥ 3 regular follow-ups visiting a Diabetes Specialty Clinic in Patna Bihar India were considered for this retrospective analysis. All patients were tested to exclude any degree of retinal abnormality or retinopathy or any type of cardiovascular complication before addition of hydroxychloroquine.

Results: Mean age of the patients included was 55.2 ± 9.58 years, with 71 (54.2%) were males. Patients were having ≥ 60 Kg body weight and 80 (61%) had T2DM for ≥ 5 yrs. Patients achieving glycemic control ($HbA1c \leq 7\%$) with the addition of hydroxychloroquine were 120 (91.6%) ($P < 0.05$). The mean duration required to achieve glycemic control after adding hydroxychloroquine was 2.8 months. The mean $HbA1c$ reduced significantly by $1.31 \pm 0.5\%$ from the baseline of 7.96 ± 0.5 to $6.65 \pm 0.5\%$ ($P = 0.001$). The fasting blood glucose was reduced from 158.3 ± 27.4 to 114.8 ± 11.2 mg/dl (mean difference: -43.5 ± 14.6 mg/dl; $P = 0.001$). Whereas the post prandial blood glucose was reduced from 226.9 ± 23.8 to 158.6 ± 22.6 mg/dl (mean difference: -68.3 ± 21.4 mg/dl; $P = 0.001$). The response in age group < 55 years was 90.6%, whereas in ≥ 55 years group, it was 82.1%. Patients with < 5 years duration of diabetes responded more (91.8%) compared to patients with a longer duration (≥ 5 years) of diabetes (83.4%).

Conclusion: When type 2 diabetes is uncontrolled by using three oral anti-diabetic drugs adding hydroxychloroquine as a fourth add-on therapeutic agent is effective in achieving the desired glycemic control.

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