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Comparative Epidemiological Study on Novel Insulin Devices and Oral Dosage Form

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Running title: Point Prevalence Study of Antidiabetic's for estimation of Drug Resistance and Assessment of Liver Function as well as Kidney Function.

Corresponding Address: <u>serviceheb@gmail.com</u>, <u>vaishnavikendre1057@gmail.com</u> **ABSTRACT**:

Diabetes mellitus is a metabolic disorder which is characterized major health care problems worldwide and affecting a great number of the world population. Comparatively, a large percentage of world population is affected by DM. Insulin is the first medicament to be discovered in 1921 by Banting & Best for diabetes. 59% of population in India affected by diabetes mellitus which are intended novel insulin devices for their treatment. Most patients utilize insulin inhaler, insulin pump, insulin pens and transdermal patches as well. As per our hospital-based study on 100 patients in which the people of diabetes mellitus have used insulin devices for treatment. Our comparative epidemiological study has been proven that there is 56% prevalence recovery rate greater in patients with use of insulin devices as compared to oral dosage form consuming patient's. We concluded that, there is more disease recovery rate in patient with insulin devices comparing to oral dosage form. There are minimum precipitation ADRs and less chances for toxicity of renal and hepatic systems due to its rapid systemic absorption. In terms of oral dosage form, they are significant for renal impairments due to its active metabolite form which are toxic in nature. Novel insulin devices are able to improve quality of life and possess greater bioavailability compared to other dosage form and medical devices.

KEYWORDS:

Diabetes mellitus, Novel Insulin devices, Insulin pens, Quality of Life, Renal impairments, Bioavailability, Comparative epidemiological study.

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