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ABSTRACT BOOK

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Friday, June 9–Tuesday, June 13, 2000

Henry B. Gonzalez Convention Center
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San Antonio, Texas

POSTERS

413-P

Single Dose Treatment of Diabetic Patients by the DP IV Inhibitor P32/98

HANS-U. DEMUTH, TORSTEN HOFFMANN, KONRAD GLUND, CHRISTOPHER H. S. MCINTOSH, RAYMOND A. PEDERSON, KATJA FUECKER, SABINE FISCHER, MARKOLF HANEFELD, *Halle (Saale), Germany; Vancouver, Canada; Dresden, Germany*

The DP IV inhibitor Di-[3N-((2S,3S)-2-amino-3-methyl-pentanoyl) 1,3-thiazolidine] fumarate (P32/98) improves glucose tolerance (Gt) by an incretin-mediated enhanced insulin response in normal and diabetic rodents, as well as in human volunteers. Within the clinical program, a pilot study in diabetic patients on different therapies was designed. Goal of the open investigation was the evaluation of patients response to a single dose of 60 mg P32/98 15 min prior to an OGTT (75 g) after over-night fasting and 12 hour post-medication (diet, acarbose, metformin, glibenclamide or insulin). Patients (n=20, men) were allocated according to there current medication to 5 groups, each receiving placebo and OGTT at the beginning of the experiment. Seven days later, again after over-night fasting and 12 hours post-medication, 15 min prior OGTT one tablet containing 60 mg P32/98 was administered. Glucose response was recorded every 15 min in an interval of -15 to 300 min. Blood samples were taken to all that time points for determination of P32/98, glucose, insulin, proinsulin, C-peptide, GLP-1, glucagon, FFA and leptin. As expected, a profound Gt improvement caused by P32/98 was observed in patients being treated with acarbose or glibenclamide. In these cases the glucose tolerance improvement was 20.6% and 31.3%, respectively. These values parallel the elevated insulin responses observed after P32/98 treatment in these patients. In contrast, in diabetics on insulin therapy, the acute Gt improvement after a single dose of P32/98 was 8.8% only (assessed by area under the Gt curve). Whether insulin resistance can be reduced or islet responsiveness will improve, mediated by DP IV inhibition, remains to be proven by longer term application of P32/98 in such patients.

A numeral beside an author's name indicates a duality of interest. See page 93.

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