

TABLE 2

Date	Weight	Follow-up, clinical data			
		Reversal of left arm insensitivity (cm)	Reversal of right arm insensitivity (cm)	Daily insulin (U) dose	Daily diazoxide (mg) dose
Aug 1998	125	0	0	0	450
Oct 1998	120	27	0	98	600
Feb 1999	115	45	18	98	600
March 1999	107	45	38	74	600

It can therefore be concluded that administration of oral diazoxide in the treatment of syndrome-X was effective in causing insulin sensitization, decreasing cholesterol and TG levels, lowering blood pressure, reducing weight and reversing thermal and pain insensitivity.

Example 2:

Possible methods of treatment and compositions for administration for the treatment of syndrome-X and diabetes complications

Diazoxide can be administered to a subject in a number of ways, which are well known in the art. For example administration may be done orally, intravenously, subcutaneously, intramuscularly, parenterally, nasally or rectally. The most preferred route is oral.

Diazoxide can be administered to subjects with diagnosed metabolic syndrome or adult-onset diabetes. Additionally, it can be given to subjects at risk, or to those with a symptom indicative of syndrome-X, such as hyperlipidemia, hypertension, central obesity, hyperinsulinemia and impaired glucose intolerance.

Example 3:

Various compositions for the treatment of syndrome-X as well as resulting complications and diabetes complications

Compositions for oral administration, which is a preferred route of administration, can be in a form that include powders or granules, suspensions or solutions in water or non-aqueous media, sachets, capsules, tablets, gels and sustained release formulations. Thickeners, diluents, flavorings, vitamins dispersing aids, emulsifiers or binders may be desirable.

All kinds of pharmaceutical compositions administrable by subcutaneous routes can be advantageously used in the present invention.

Compositions for intravenous administration, can be in a form that includes liquid suspensions or solutions in water or non-aqueous media.

Dosing is dependent on the responsiveness of the subject to diazoxide. Preferably the dose is from about 4 mg to about 15 mg/kg. More preferably the dose is from about 5 mg/kg to about 8 mg/kg and most preferably the dose is about 5 mg/kg. The amount received by the subject is controlled. For example as a pill, the dose and frequency of dosing would be dependent on the responsiveness of the subject. Persons of ordinary skill in the art can easily determine optimum dosages, dosing methodologies and repetition rates.

It will be appreciated that the above examples and descriptions are intended only to serve as examples, and that many other embodiments are possible within the spirit and the scope of the present invention.

REFERENCES CITED

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4. Reaven, G. Role of insulin resistance in human disease. *Diabetes*. 37:1595-1607, 1988

5. Ferrannini, E. et al. Hyperinsulinemia: the key feature of a cardiovascular and metabolic syndrome. *Diabetologia*. 34:416-422, 1991.

What is claimed is:

1. A method for treating syndrome-X and resulting complications in a subject in need thereof, comprising the step of administering to the subject, a pharmaceutically effective amount of diazoxide to interfere with pancreatic islet function, by ablating endogenous insulin secretion, resulting in a state of insulin deficiency and high blood glucose levels equivalent to that of diabetic patients that depend on exogenous insulin administration for normalization of their blood glucose levels.

2. The method of claim 1, wherein said complication is selected from the group consisting of central obesity, hyperlipidemia, hyperinsulinemia, hypertension and impaired glucose tolerance.

3. The method of claim 1, wherein said pharmaceutically effective amount is from about 4 mg/kg to about 15 mg/kg.

4. The method of claim 1, wherein said pharmaceutically effective amount is from about 5 mg/kg to about 8 mg/kg.

5. The method of claim 1, wherein the preferred route of administration is oral.

6. The method of claim 5, wherein said diazoxide is provided in a tablet form.

7. The method of claim 1, wherein said diazoxide is provided in an intravenous form.

8. The method of claim 1, wherein said diazoxide is administered until endogenous insulin levels are lowered.

9. The method of claim 8, wherein exogenous insulin must be administered.

10. The method of claim 1, wherein said diazoxide decreases proinsulin levels.

11. The method of claim 1, wherein said diazoxide decreases proinsulin and insulin precursor levels.

12. A method for prophylactic treatment of syndrome-X in a subject in need thereof, comprising the step of administering to the subject a pharmaceutically effective amount of diazoxide to interfere with pancreatic islet function, by ablating endogenous insulin secretion, resulting in a state of insulin deficiency and high blood glucose levels equivalent to that of diabetic patients that depend on exogenous insulin administration for normalization of their blood glucose levels.

13. A method for reducing weight in a subject with syndrome-X, comprising the step of administering to the subject a pharmaceutically effective amount of diazoxide to interfere with pancreatic islet function, by ablating endogenous insulin secretion resulting in a state of insulin deficiency and high blood glucose levels equivalent to that of diabetic patients that depend on exogenous insulin administration for normalization of their blood glucose levels.

14. A method for reducing the levels of circulating cholesterol and triglycerides in a subject with syndrome-X, comprising the step of administering to the subject a pharmaceutically effective amount of diazoxide to interfere with pancreatic islet function, by ablating endogenous insulin secretion resulting in a state of insulin deficiency and high blood glucose levels equivalent to that of diabetic patients that depend on exogenous insulin administration for normalization of their blood glucose levels.

15. A method for lowering blood pressure in a subject with syndrome-X, comprising the step of administering to the subject a pharmaceutically effective amount of diazoxide