xxxxxxx-5343

GLIMEPIRIDE

AZULIX 2 mg Tablet **Oral hypoglycemic**

FORMULATION:

Each tablet contains: Glimepiride PRODUCT DESCRIPTION:

Yellow colored, oval shaped, biconvex, uncoated tablets with break line on one side

Pharmacodynamic properties:

Glimepiride is an orally active hypoglycaemic substance belonging to the sulfonylurea group. It may be used in non-insulin dependent diabetes mellitus.

Glimepiride acts mainly by stimulating insulin release from pancreatic beta cells.

. 2 mg

As with other sulforylureas this effect is based on an increase of responsiveness of the pancreatic beta cells to the physiological glucose stimulus. In addition, glimepiride seems to have pronounced extrapancreatic effects also postulated for other sulfonylureas. Insulin release

Sulfonylureas regulate insulin secretion by closing the ATP-sensitive potassium channel in the beta cell membrane. Closing the potassium channel induces depolarisation of the beta cell and results by opening of calcium channels - in an increased influx of calcium into the cell.

This leads to insulin release through exocytosis. Glimepiride binds with a high exchange rate to a beta cell membrane protein which is associated with the ATP-sensitive potassium channel but which is different from the usual sulfonylurea binding site

Extrapancreatic activity

The extrapancreatic effects are for example an improvement of the sensitivity of the peripheral tissue for insulin and a decrease of the insulin uptake by the liver. The uptake of glucose from blood into peripheral muscle and fat tissues occurs via special transport proteins, located in the cells membrane. The transport of glucose in these tissues is the rate limiting step in the use of glucose. Glimepiride increases very rapidly

the number of active glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated glucose transport molecules in the plasma membranes of muscle and fat cells, resulting in stimulated gluco drug-induced lipogenesis and glycogenesis in isolated fat and muscle cells. Glimepiride inhibits the glucose production in the liver by increasing the intracellular concentration of fructose-2, 6bisphosphate, which in its

turn inhibits the gluconeogenesis General

In healthy persons, the minimum effective oral dose is approximately 0.6 mg. The effect of glimepiride is dose-dependent and reproducible. The physiological response to acute physical exercise, reduction of insulin secretion, is still present under glimepiride. There was no significant difference in effect regardless of whether the medicinal product was given 30 minutes or immediately before a meal.

In diabetic patients, good metabolic control over 24 hours can be achieved with a single daily dose Although the hydroxy metabolite of glimepiride caused a small but significant decrease in serum glucose in healthy persons, it accounts for only a minor part of the total drug effect.

Combination therapy with insulin Data for combination therapy with insulin are limited. In patients not adequately controlled with the maximum dosage of glimepiride, concomitant insulin therapy can be initiated. In two studies, the combination achieved the same improvement in metabolic control as insulin

alone; however, a lower average dose of insulin was required in combination therapy Special populations

Children and adolescents

An active controlled clinical trial (glimepiride up to 8 mg daily or metformin up to 2,000 mg daily) of 24 weeks duration was performed in 285 children (8-17 years of age) with type 2 diabetes.

Both gimepiride and metformin exhibited a significant decrease from baseline in HbA1c (glimepiride -0.95 (se 0.41); metformin -1.39 (se 0.40)). However, glimepiride did not achieve the criteria of non-inferiority to metformin in mean change from baseline of HbA1c. The difference between treatments was 0.44% in favor of metformin. The upper limit (1.05) of the 95% confidence interval for the difference was Following glimepiride treatment, there were no new safety concerns noted in children compared to adult patients with type 2 diabetes

mellitus. No long-term efficacy and safety data are available in paediatric patients

Pharmacokinetics Absorption: The bioavailability of glimepiride after oral administration is complete. Food intake has no relevant influence on absorption, only absorption rate is slightly diminished. Maximum serum concentrations (Cmax) are reached approx. 2.5 hours after oral intake (mean 0.3 µg/m) during multiple dosing of 4 mg daily) and there is a linear relationship between dose and both Cmax and AUC (area under the time/concentration curve).

Distribution: Glimepiride has a very low distribution volume (approx. 8.8 litres) which is roughly equal to the albumin distribution space, high

protein binding (>99%), and a low clearance (approx. 48 ml/min). In animals, glimepiride is excreted in milk. Glimepiride is transferred to the placenta. Passage of the blood brain barrier is low. *Biotransformation and elimination:* Mean dominant serum half-life, which is of relevance for the serum concentrations under multiple-dose

conditions, is about 5 to 8 hours. After high doses, slightly longer half-lives were noted. After a single dose of radiolabelled glimepiride, 58% of the radioactivity was recovered in the urine, and 35% in the faeces. No unchanged substance was detected in the urine. Two metabolites most probably resulting from hepatic metabolism (major enzyme is CYP2C9) - were identified both in urine and faeces: the hydroxy derivative and the carboxy derivative. After oral administration of glimepiride, the terminal half-lives of these metabolites were 3 to 6 and 5 to 6 hours respectively.

Comparison of single and multiple once-daily dosing revealed no significant differences in pharmacokinetics, and the intraindividual variability was very low. There was no relevant accumulation.

Special populations

Pharmacokinetics were similar in males and females, as well as in young and elderly (above 65 years) patients. In patients with low creatinine clearance, there was a tendency for glimepiride clearance to increase and for average serum concentrations to decrease, most probably resulting from a more rapid elimination because of lower protein binding. Renal elimination of the two metabolites was impaired. Overall no additional risk of accumulation is to be assumed in such patients.

Pharmacokinetics in five non-diabetic patients after bile duct surgery were similar to those in healthy persons

Children and adolescents

A fed study investigating the pharmacokinetics, safety, and tolerability of a 1 mg single dose of glimepiride in 30 paediatric patients (4 children aged 10-12 years and 26 children aged 12-17 years) with type 2 diabetes showed mean AUC(0-last), Cmax and t1/2 similar to that previously observed in adults.

INDICATION:

Indicated as an adjunct to diet and exercise to lower the blood glucose in patients with non-insulin dependent (Type II) Diabetes Mellitus whose hyperglycemia cannot be controlled by diet and exercise alone

DOSAGE AND ADMINISTRATION:

The starting dose is 1 mg glimepiride per day. If good control is achieved this dosage should be used for maintenance therapy.

For the different dosage regimens appropriate strengths are available. If control is unsatisfactory the dosage should be increased, based on the glycaemic control, in a stepwise manner with an interval of about 1 to 2 weeks between each step, to 2, 3 or 4 mg glimepiride per day.

A dosage of more than 4 mg glimepiride per day gives better results only in exceptional cases. The maximum recommended dose is 6 mg glimepiride per day.

In patients not adequately controlled with the maximum daily dose of metformin, concomitant glimepiride therapy can be initiated. While maintaining the metformin dose, the glimepiride therapy is started with a low dose, and is then titrated up depending on the desired level of metabolic control up to the maximum daily dose. The combination therapy should be initiated under close medical supervision.

In patients not adequately controlled with the maximum daily dose of Glimepiride, concomitant insulin therapy can be initiated if necessary. While maintaining the glimepiride dose, insulin treatment is started at low dose and titrated up depending on the desired level of metabolic control. The combination therapy should be initiated under close medical supervision

Normally a single daily dose of glimepirde is sufficient. It is recommended that this dose be taken shortly before or during a substantial breakfast or if none is taken - shortly before or during the first main meal.

If a dose is forgotten, this should not be corrected by increasing the next dose.

Tablets should be swallowed whole with some liquid.

If a patient has a hypoglycaemic reaction on 1 mg glimepiride daily, this indicates that they can be controlled by diet alone. In the course of treatment, as an improvement in control of diabetes is associated with higher insulin sensitivity, glimepiride requirements may

To avoid hypoglycaemia timely dose reduction or cessation of therapy must therefore be considered. Change in dosage may also be necessary, if there are changes in weight or life style of the patient, or other factors that increase the risk of hypo-or hyperglycaemia.

Switch over from other oral hypoglycaemic agents to Glimepiride A switch over from other oral hypoglycaemic agents to Glimepiride can generally be done. For the switch over to Glimepiride the strength and

the half-life of the previous medicinal product has to be taken into account. In some cases, especially in antidiabetics with a long half-life (e.g. chlorpropamide), a wash out period of a few days is advisable in order to minimize the risk of hypoglycaemic reactions due to the additive effect.

The recommended starting dose is 1 mg glimepiride per day. Based on the response the glimepiride dosage may be increased stepwise, as

indicated earlier. Switch over from Insulin to Glimepiride

In exceptional cases, where type 2 diabetic patients are regulated on insulin, a changeover to Glimepiride may be indicated. The changeover should be undertaken under close medical supervision.

Special Populations

- certain uncompensated disorders of the endocrine system affecting carbohydrate metabolism or counter-regulation of hypoglycaemia (as for example in certain disorders of thyroid function and in anterior pituitary or adrenocortical insufficiency), - concurrent administration of certain other medicinal products Treatment with Glimepiride requires regular monitoring of glucose levels in blood and urine. In addition determination of the proportion of glycosylated haemoglobin is recommended. Regular hepatic and haematological monitoring (especially leucocytes and thrombocytes) are required during treatment with Glimepiride. In stress-situations (e.g. accidents, acute operations, infections with fever, etc.) a temporary switch to insulin may be indicated No experience has been gained concerning the use of Glimepiride in patients with severe impairment of liver function or dialysis patients. In patients with severe impairment of renal or liver function change over to insulin is indicated. Treatment of patients with G6PD-deficiency with sulfonylurea agents can lead to hemolytic anemia. Since glimepiride belongs to the class of Sulforylurea agents, caution should be used in patients with G6PD-deficiency and a non-sulfonylurea alternative should be considered. Glimepiride contains lactose monohydrate. Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicine. Effects on ability to drive and use machines No studies on the effects on the ability to drive and use machines have been performed. The patient's ability to concentrate and react may be impaired as a result of hypoglycaemia or hyperglycaemia or, for example, as a result of visual impairment. This may constitute a risk in situations where these abilities are of special importance (e.g. driving a car or operating machinery). Patients should be advised to take precautions to avoid hypoglycaemia while driving. This is particularly important in those who have reduced or absent awareness of the warning symptoms of hypoglycemia or have frequent episodes of hypoglycemia. It should be considered whether is advisable to drive or operate machinery in these circumstances ADVERSE EFFECTS: The following adverse reactions from clinical investigations were based on experience with Glimepiride and other sulfonylureas, were listed below by system organ class and in order of decreasing incidence (very common: 1/10; common: 1/100 to <1/10; uncommon: 1/1,000 to <1/10; uncommon: 1/10; uncom Blood and lymphatic system disorders Rare: thrombocytopenia, leukopenia, granulocytopenia, agranulocytosis, erythropenia, hemolytic anaemia and pancytopenia, which are in general reversible upon discontinuation of medication. Immune system disorders Very rare: leukocytoclastic vasculitis, mild hypersensitivity reactions that may develop into serious reactions with dyspnea, fall in blood pressure and sometimes shock. Not-known: cross-allergenicity with sulfonylureas, sulfonamides or related substances is possible. Metabolism and nutrition disorders Rare: hypoglycemia. These hypoglycemic reactions mostly occur immediately, may be severe and are not always easy to correct. The occurrence of such reactions depends, as with other hypoglycemic therapies, on individual factors such as dietary habits and dosage Eye disorders Not known: visual disturbances, transient, may occur especially on initiation of treatment, due to changes in blood glucose levels. Gastrointestinal disorders Very rare: nausea, vomiting, diarrhea, abdominal distension, abdominal discomfort and abdominal pain, which seldom lead to discontinuation of therapy Hepato-biliary disorders Not known: hepatic enzymes increased. Very rare: hepatic function abnormal (e.g. with cholestasis and jaundice), hepatitis and hepatic failure. Skin and subcutaneous tissue disorders Not known: hypersensitivity reactions of the skin may occur as pruritus, rash, urticaria and photosensitivity. Investigations Very rare: blood sodium decrease "For suspected adverse drug reaction, report to FDA: www.fda.gov.ph or to TORRENT: www.torrentpharma.com". ent to seek medical attention immediately at the first sign of any adverse drug reaction shall appear OVERDOSAGE: After ingestion of an overdosage hypoglycaemia may occur, lasting from 12 to 72 hours, and may recur after an initial recovery. Symptoms may not be present for up to 24 hours after ingestion. In general observation in hospital is recommended. Nausea, vomiting and epigastric pain may occur. The hypoglycaemia may in general be accompanied by neurological symptoms like restlessness, tremor, disturbances, co-ordination problems, sleepiness, coma and convulsions. visual

Treatment primarily consists of preventing absorption by inducing vomiting and then drinking water or lemonade with activated charcoal (adsorbent) and sodium-sulphate (laxative). If large quantities have been ingested, gastric lavage is indicated, followed by activated charcoal and sodium-sulphate.

In case of (severe) overdosage hospitalization in an intensive care department is indicated. Start the administration of glucose as soon as possible, if necessary by a bolus intravenous injection of 50 ml of a 50% solution, followed by an infusion of a 10% solution with strict monitoring of blood glucose. Further treatment should be symptomatic.

In particular when treating hypoglycemia due to accidental intake of Glimepiride in infants and young children, the dose of glucose given must be carefully controlled to avoid the possibility of producing dangerous hyperglycaemia. Blood glucose should be closely monitore DRUG INTERACTIONS:

If glimepiride is taken simultaneously with certain other medicinal products, both undesired increases and decreases in the hypoglycemic action of glimepiride can occur. For this reason, other medicinal products should only be taken with the knowledge (or at the prescription) of

Glimepiride is metabolized by cytochrome P450 2C9 (CYP2C9). Its metabolism is known to be influenced by concomitant administration of CYP2C9 inducers (e.g. rifampicin) or inhibitors (e.g. fluconazole). Results from an in vivo interaction study reported in literature show that glimepiride AUC is increased approximately 2-fold by fluconazole,

one of the most potent CYP2C9 inhibitors

Based on the experience with glimepiride and with other sulfonylureas the following interactions have to be mentioned

Potentiation of the blood-glucose-lowering effect and, thus, in some instances hypoglycaemia may occur when one of the following medicinal products is taken, for example: - phenylbutazone, azapropazone and oxyfenbutazone,

- insulin and oral antidiabetic products, such as metformin

salicylates and paminosalicylic acid,
 anabolic steroids and male sex hormones,

- chloramphenicol, certain long acting sulfonamides, tetracyclines, quinolone antibiotics and clarithromycin,

- coumarin anticoagulants,

- fenfluramine.

- disopyramide

- fibrates, - ACE inhibitors

- fluoxetine, MAO-inhibitors,

- allopurinol, probenecid, sulfinpvrazone

sympatholytics,

- cyclophosphamide, trophosphamide and iphosphamides,

miconazole, fluconazole
pentoxifylline (high dose parenteral),

tritoqualine

Weakening of the blood-glucose-lowering effect and, thus raised blood glucose levels may occur when one of the following medicinal products is taken, for example:

oestrogens and progestogens,
 saluretics, thiazide diuretics,

thyroid stimulating agents, glucocorticoids,
phenothiazine derivatives, chlorpromazine,

adrenaline and sympathicomimetics,

- nicotinic acid (high dosages) and nicotinic acid derivatives,

- laxatives (long term use),

- phenytoin, diazoxide

- glucagon, barbiturates and rifampicin,

acetazolamide.

H2 antagonists, beta-blockers, clonidine and reserpine may lead to either potentiation or weakening of the blood glucose lowering effect. Under the influence of sympatholytic medicinal products such as beta-blockers, clonidine, guanethidine and reserpine, the signs of adrenergic counter-regulation to hypoglycaemia may be reduced or absent. Alcohol intake may potentiate or weaken the hypoglycemic action of glimepiride in an unpredictable fashion. Glimepiride may either potentiate or weaken the effects of coumarin derivatives.

Abnormal blood glucose levels during pregnancy are associated with a higher incidence of congenital abnormalities and perinatal mortality. So the blood glucose level must be closely monitored during pregnancy in order to avoid the teratogenic risk. The use of insulin is required

There are no adequate data from the use of glimepiride in pregnant women. Animal studies have shown reproductive toxicity which likely was

under such circumstances. Patients who consider pregnancy should inform their physician.

related to the pharmacologic action (hypoglycemia) of glimepiride. Consequently, glimepiride should not be used during the whole pregnancy.

PREGNANCY AND LACTATION:

Pregnancy

Risk related to glimepiride

Risk related to the diabetes

In case of severe renal or hepatic function disorders, a change over to insulin is required

Children and adolescents There are no data available on the use of glimepiride in patients under 8 years of age. For children aged 8 to 17 years, there are limited data on glimepiride as monotherapy

available data on safety and efficacy are insufficient in the paediatric population and therefore such use is not recom CONTRAINDICATIONS:

Glimepiride is contraindicated in patients with the following conditions: - hypersensitivity to glimepiride, other sulfonylureas or sulfonamides or to any of the excipients - insulin dependent diabetes

diabetic coma

ketoacidosis

severe renal or hepatic function disorders. In case of severe renal or hepatic function disorders, a change over to insulin is required. WARNING AND PRECAUTIONS:

Glimepiride must be taken shortly before or during a meal.

When meals are taken at irregular hours or skipped altogether, treatment with Glimepiride may lead to hypoglycemia. Possible symptoms of hypoglycemia include: headache, ravenous hunger, nausea, vomiting, lassitude, sleepiness, disordered sleep, restlessness, aggressiveness, impaired concentration, alertness and reaction time, depression confusion, speech and visual disorders, aphasia, tremor, paresis, sensory disturbances, dizziness, helplessness, loss of self-control, delirium, cerebral convulsions, somnolence and loss of consciousness up to and including coma, shallow respiration and brackardia. In addition, signs of adrenergic counter-regulation may be present such as sweating, clammy skin, anxiety, tachycardia, hypertension, palpitations, angina pectoris and cardiac arrhythmias. The clinical picture of a severe hypoglycemic attack may resemble that of a stroke.

Symptoms can almost always be promptly controlled by immediate intake carbohydrates (sugar). Artificial sweeteners have no effect. It is known from other sulfonylureas that, despite initially successful countermeasures, hypoglycaemia may recur.

Severe hypoglycemia or prolonged hypoglycaemia, only temporarily controlled by the usual amounts of sugar, require immediate medical treatment and occasionally hospitalization.

Factors favoring hypoglycemia include:

- unwillingness or (more commonly in older patients) incapacity of the patient to cooperate,
 - undernutrition, irregular mealtimes or missed meals or periods of fasting,

alterations in diet.

imbalance between physical exertion and carbohydrate intake

- consumption of alcohol, especially in combination with skipped meals

- impaired renal function,

serious liver dysfunction

- overdosage with Glimepiride,

PRODUCT NAME	:	AZULIX	COUNTRY : Philippines	LOCATION : INDRAD		Supersedes A/W No.:		
ITEM / PACK	:	Insert	NO. OF COLORS: 1	REMARK : 30mm Folding				
DESIGN STYLE	:	Front/Back	PANTONE SHADE NOS .:	SUBSTRATE :				
CODE	:	xxxxxxxx-5343	Black	Activities	Department	Name	Signature	Date
DIMENSIONS (MM)	:	150 x 400		Prepared By	Pkg.Dev			
ART WORK SIZE	:	S/S		Reviewed By	Pkg.Dev			
DATE	:	16-06-2016		Approved By	Quality			
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This colour proof is not colour binding. Follow Pantone shade reference for actual colour matching.

In case of treatment by glimepiride, if the patient plans to become pregnant or if a pregnancy is discovered, the treatment should be switched as soon as possible to insulin therapy. Breastfeeding The excretion in human milk is unknown. Glimepiride is excreted in rat milk. As other sulfonylureas are excreted in human milk and because there is a risk of hypoglycaemia in nursing infants, breast-feeding is advised against during treatment with glimepiride CAUTION: Foods, Drugs, Devices and Cosmetics Act prohibits dispensing without prescription STORAGE CONDITION: Store at temperatures not exceeding 30°C. AVAILABILITY: Glimepiride (Azulix) 2 mg Tablet-Blister pack of 10's, (Box of 100's). - DRP-2324 DATE OF FIRST AUTHORIZATION

February 15, 2006 DATE OF REVISION June 2016



Manufactured by TORRENT PHARMACEUTICALS LTD Indrad-382 721, Dist. Mehsana, INDIA

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