



DiabetesWatch

A publication of the PHILIPPINE DIABETES ASSOCIATION, INC.

YEAR XI, NO. 1

JANUARY - JUNE, 1994

Third Mid Year Convention:

Theme:

MANAGEMENT PROBLEMS IN DIABETES

The 3rd Midyear Convention of the PDA will be held at the Teachers' Camp in Baguio City on Sunday, June 26, 1994.

To be highlighted are two Asian cooperative studies - the completed study on Impaired Glucose Tolerance, and the ongoing study on Diabetes Mellitus in Pregnancy. Dr. Thelma Dimalanta-Crisostomo and Dr. Clive Cockram of the Chinese University of Hongkong will discuss IGT, whereas Dr. Augusto D. Litonjua and Dr. Rosa Allyn Sy will present data on GDM. A report on GDM, independent from the ASEAN study, will be discussed by Dr. Editha Arceo-Dalisay.

Another topic of interest - combination therapy using the oral hypoglycemic agents and insulin for the achievement of better blood glucose control - will have Dr. Clive Cockram and Dr. Laura Trajano-Acampado as the discussants.

The lay program will deal with four topics which every patient should know about: diet,

PROGRAMME

THIRD MIDYEAR CONVENTION

26 June 1994, Teachers' Camp, Baguio City

PHYSICIANS

MORNING SESSIONS:

I. IGT: The Reawakening

A. ASEAN Study on IGT....

Thelma Crisostomo, M.D.

B. Update on IGT.....

Clive Cockram, M.D.

Moderator:

Joselynn Anel-Quimpo, M.D.

II. Combination Therapy

A. A Quest for Better Glycemic Control.....

Clive Cockram, M.D.

B. The Philippine Experience.....

Laura Trajano-Acampado, M.D.

Moderator:

Lina Lantion-Ang, M.D.

AFTERNOON SESSIONS:

III. What's New in GDM?

A. GDM: Current Perspective on Screening, Diagnosis and Management.....

Augusto D. Litonjua, M.D.

B. Viewpoint on GDM: Report from ASGODIP-Participating Hospital (CSMC).....

Rosa Allyn Sy, M.D.

Report from Non-ASGODIP Participating Hospital (UERMMMC).....

Editha Arceo-Dalisay, M.D.

Moderator: Ruby Go, M.D.

Master of Ceremonies:

Mary Anne Lim-Abrahan, M.D.

LAY

AFTERNOON SESSION:

Consult the Experts.....

Is There A Place For Further Improvement In Diabetes Self-Care?

Facts Every Patient Should Know About:

Diet..... Mrs. Emy Cardino

OHA & Insulin Therapy.....

Cynthia Chua-Ho, M.D.

Glucose Monitoring.....

Tommy Ty-Willing, M.D.

Coping & Adherence.....

Roberto Mirasol, M.D.

INTERACTIVE SESSIONS:

Moderator:

Ricardo Fernando, M.D.

Master of Ceremonies

Rosa Allyn Sy, M.D.

hypoglycemic drugs, glucose monitoring and coping & adherence. The experts include

Ms. Emy Cardino, Dr. Cynthia Chua-Ho, Dr. Tommy Ty-Willing

(Continued on page 10)

ASEAN Diabetes Educators Formed

Dr. Augusto D. Litonjua was unanimously elected president of the newly formed ASEAN Diabetes Educators last June 3 at the Goodwood Park Hotel in Singapore. Also elected by the founding members were Dr. Tan Yeang Tin of Singapore as vice-president; Dr. Roberto Mirasol, secretary; and Dr. Araceli Panelo, treasurer.

The grouping will bring together key people engaged in diabetes care in the region, formulate a common curriculum which will be adopted as basic in the ASEAN countries, recognize personnel and clinics, carry out regular meetings to coincide with the ASEAN Federation of Endocrine Societies (AFES) Congresses, and interact as a

(Continued on page 2)

8th Diabetes Workshop

The 8th Diabetes Workshop will be held at the Teachers' Camp, Baguio City on June 23 to 25, 1994, preceding the 3rd Midyear Convention of the PDA. Considered as the premier postgraduate course in diabetes for internists and other physicians, the 8th Workshop has been developed with the cooperation of the Northern Luzon chapters of PDA, i.e., Baguio-Benguet, La Union, Pangasinan, Ilocos Norte and Sur, and Cagayan.

The cooperating agencies include: Bayer Diagnostics, Bayer

(Continued on page 9)



Dr. Clive Cockram

Novo-Nordisk Diabetes Awardee

Dr. Mary Anne Lim-Abraham, current president of the ASEAN Federation of Endocrine Societies, was chosen Novo-Nordisk Diabetes Awardee for 1993, in recognition of her outstanding contribution in the field of diabetes education, research and community service. The Award was presented during the Annual Convention of the Philippine Diabetes Association last December 7, 1993 at the Century Park Sheraton Hotel. The Award



consisted of P100,000 in cash, P10,000 worth of medical textbooks and medical journals, as well as, a plaque of recognition.

1993 IDF / Eli Lilly Fund Awardee

Dr. Roberto Mirasol was one of the recipients of the International Diabetes Federation (IDF)/Eli Lilly Fund for 1993. His award consisted of US \$4,400.00 to set up an intensive program of diabetes education in a developing country and study its impact on metabolic control, emotional well-being, self-care and knowledge.

The IDF/Eli Lilly Fund Committee is composed of Prof. Pierre Lefebvre, chairman; Prof. Tom Johnson (IDF Africa) and Prof. Morsi Arab (IDF East Mediterranean and Middle East) as members.

ASEAN Diabetes Educators ... (From page 1)



LITONJUA



MIRASOL



PANELO

group.

The founding members-brought together on the invitation of Dr. Litonjua, - are: Dr. Sarwono Waspadji and Dr. Henpro Martono, Indonesia; Dr. Sakinah S. Othman, Prof. Mustaffa Embong and Prof. Annur Zaini, Malaysia; Dr. Tan Yeang Tin, Singapore; Dr. Apichati Vichayanrat and

Dr. Sunitaya Chandraprasert, Thailand; and Drs. Litonjua, Mirasol and Panelo, Philippines. Eli Lilly sponsored the organizational meeting.

As a first activity, a workshop on psychosocial aspects of diabetes and/or teaching principles and communication skills development will be held sometime in the year.

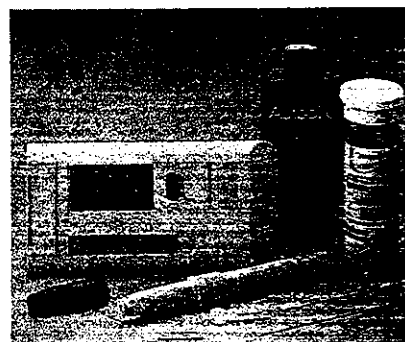
The Importance... (From page 12)

minimized, delayed and perhaps can even be prevented. Patients in good metabolic control also

experience a better sense of well-being, and a more productive life style at less expense for the patient and his family.

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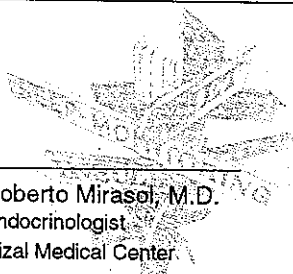
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Roberto Mirasol, M.D.
Endocrinologist
Rizal Medical Center

Everything you always wanted to know about **DIABETES...**

(but were afraid to ask!)

Beginning this issue of **DiabetesWatch** we will focus on questions you, our readers, ask us very often. In the management of your diabetes, you have much of the responsibility for your care. You must learn how to eat the right kinds of food, exercise regularly, take your medications and sometimes test your blood sugar. To handle all these responsibilities you have to learn how to cope with your disease. We hope that through this column, we maybe able to help you with questions you may have about diabetes but are afraid to ask your very busy doctor. For this issue we will focus on the general aspects about diabetes.

I have NIDDM. Does this mean I have a mild disease?

Most diabetic individuals don't take their disease seriously. Just because you are not on insulin or you don't require insulin doesn't mean you have a mild disease. Early treatment with good control would prevent or delay onset of complications (especially in the blood vessels and nerves).

If I begin insulin injections, will I require insulin for life?

The answer will depend on the type of diabetes you have. If you have IDDM, or insulin dependent diabetes mellitus (those that have very little or no insulin secretion of their own and need insulin from outside sources for their survival) then you need insulin to sustain life. If however you have NIDDM, or non-insulin dependent diabetes mellitus (those who have their own insulin secretion but not properly utilized by their body or with resistance to their own insulin), you may need insulin injections to maintain good blood sugar control during periods of stress e.g. infections, surgery, injury, emotional stress. Once you get through these stressful situations, then you can be put back to the type of treatment you had before the stress started.

Do children and teen-agers who develop diabetes always have IDDM?

NO, although most young people who develop diabetes are usually IDDM, some may develop NIDDM. Most adults would develop NIDDM, but it is not uncommon to see adults who develop IDDM late in life.

It is said that diabetes runs in families. I have NIDDM, but my parents don't have diabetes. Why did I get it?

Inheritance plays an important role in NIDDM. Commonly it tends to develop in families and a genetic link has been observed. Your parents might have diabetes but were not overtly manifest. Having a family member with NIDDM puts all offsprings of that family at risk. At highest risk are brothers and sisters of a family member with NIDDM. For this reason if you have NIDDM, it is very important that you raise your children in a lifestyle that stresses

healthy eating and regular exercise.

Am I more likely to develop high blood pressure than a person without diabetes?

This is a correct observation. In fact, three out of four NIDDMs suffer from high blood pressure. Your risk for heart disease and strokes are increased. High blood pressure can aggravate eye and kidney diabetes complications, therefore control of blood pressure with medications and diet is highly recommended.

Can we expect a cure for diabetes in the next few years?

Although there are a lot of researches now which focus on ways to prevent or slow IDDM and NIDDM, unfortunately there will still be no cure forthcoming. Rather than expect a cure, work on improving your diabetes control and your lifestyle.

We welcome your questions, comments or suggestions. Please mail to **DiabetesWatch**, PDA, Unit 25, Facilities Center, 548 Shaw Boulevard, Mandaluyong, Metro Manila.

GLIPIZIDE MINIDIAB

MINIDIAB pharmacokinetics are more advantageous than those of other sulfonylureas

Drugs	Time (hr) to peak effect	Half-life, T _{1/2} (hr)	Duration of action (hr)	Metabolites	Overall excretion
Chlorpropamide	8-10	30-60	22-65	4 (active)	100% in 10-14 days
Glibenclamide	2-5	10-16	16-24	6 (partially active)	59% in 1 day 95% in 5 days
Gliclazide	2-6	10-12	4-24	8 (inactive)	98% by renal route in 48 hr
Glipizide	1.0-2.5	2-4	6-24	4 (inactive)	97% in 1 day 100% in 3 days

• "Glipizide evoked a more pronounced and more rapid increase of plasma insulin and correspondingly greater and faster blood glucose reduction than did glibenclamide."

• Thus, likelihood of hypoglycemia is minimized "As glipizide (Minidiab) is rapidly eliminated, and as there is no evidence that its metabolites are significantly active, the risk of long-lasting hypoglycemia should be small when using glipizide. In contrast, glibenclamide has provoked serious, and even fatal hypoglycemia in several cases; it is possible that this risk is increased in patients with renal insufficiency due to accumulation of an active polar metabolite. A similar risk is well recognized in the case of chlorpropamide."

Kidney transplantation is a process whereby a kidney from a living related or cadaver donor is transplanted to a patient whose kidneys have stopped functioning. Today the world enjoys a good experience with kidney transplantation even for diabetics. People with diabetes account for about 25% of cases of newly diagnosed kidney disease in the U.S. each year. At the National Kidney Institute here in Manila, diabetic nephropathy ranks second as a cause for kidney transplant although chronic glomerulonephritis is way ahead as the number one cause.

Who are the candidates for kidney transplantation (KT)?

Patients with End Stage Kidney Disease with available matched donors and who are free from major systemic illnesses that will significantly affect post-operative care or eventual lifespan.

What are the steps in preparing for KT?

Upon acceptance of the patient as a potential recipient into the transplant program, pretransplant evaluation is carried out. This includes blood chemistries, urine evaluation, blood and tissue typing, chest x-rays, EKG, hepatitis profile, OB-Gyn (for females) and dental clearance and nutritional assessment. Both donor and recipient are screened well. The donor also undergoes bilateral renal arteriography and post arteriogram urography. Transplant orientation is also held for the recipient, donor and his family. For cadaver donors, The H.O.P.E. (Human Organ and Preservation Effort) program coordinates with various hospitals in Metro Manila. Patients who do not have living related donors are wait listed in the "cadaver pool."

Once everything is in order,

the patient and the donor are admitted to the hospital. Immunosuppressive therapy composed of cyclosporin, azathioprine and steroids are started 3 days before the operation. These medicines will have to be maintained on a lifetime basis to prevent the kidney graft from being rejected. On the day of operation the donor kidney is attached to the iliac vessels of the recipient. These vessels are found in the lower part of the abdomen. If the patient's course is good, he gets to stay in the

regular follow ups are a must. During these visits urine and blood tests are done routinely to make sure that the kidney is functioning properly and to catch the earliest sign of infection or rejection. The blood sugars should also be monitored regularly since steroids and cyclosporine can disturb glucose tolerance. Home glucose monitoring is a must. A small population of nondiabetic recipients can also develop secondary diabetes after KT because of the immunosuppressives and the

the presence of other complications such as hypertension, liver disease, etc. Many patients also require insulin therapy to adequately control their blood sugars.

How much does a kidney transplant cost?

In the National Kidney Institute, private patients will spend approximately P200,000.00 for a kidney transplant. With government subsidy, the cost is about 80,000 to 100,000 pesos. These figures seem high but are still considerably lower compared to transplant costs abroad.

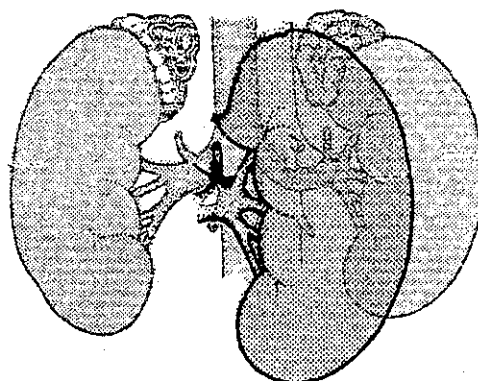
What is life after kidney transplantation?

Many transplant recipients are able to go back to their jobs and lead a normal life. We have doctors, teachers, businessmen, engineers in the long list of successful Filipino transplant recipients. The longest living KT patient has been around 23 years after KT. Just recently the National Transplant Games were held at the ULTRA. Transplant patients participated in various sports proving to themselves and others that they are capable of giving their best and achieving their goals.

Of course there are also others who do not survive long because of kidney rejection, infections and other complications. Diabetics comprise the greatest number of those developing infections after KT and survival rate for diabetics is lower compared to the nondiabetic transplant population.

Despite these considerations, kidney transplantation is still a promising option for the diabetic with end stage kidney disease. Aptly called the "gift of life," kidney transplantation offers a chance at prolonged survival, productivity and re-integration into society.

DIABETES AND KIDNEY TRANSPLANTATION



Ma. Teresa P. Que, M.D.
Endocrinologist
National Kidney Institute

hospital for about 2 weeks after which he is discharged and followed up on an outpatient basis. If signs of acute rejection occur, methylprednisolone, a potent steroid is given intravenously and the kidney graft is closely monitored. Steroids can increase blood sugars so that close monitoring of the diabetes should be done during rejection episodes.

What happens after kidney transplantation?

Post kidney transplant,

incidence ranges from 6-11% in various studies. Immunosuppressives also add to the risk of infection in the diabetic kidney transplant patient. And of course the risk of recurrent nephropathy and other chronic complications remain so that strict metabolic control should be aimed for. Most nondiabetic transplant recipients are able to enjoy a regular diet but the diabetic will have to observe the diabetic meal plan along with other modifications dictated by

One of the most distressing complications of diabetes, particularly among males, is impotence. The incidence may be quite high, ranging from 30-60% of diabetic males within 6 years following onset of the disease. Yet, despite the fairly high incidence of this complication, not too many patients will be willing to discuss the topic in view of the sensitive, and intimate nature of the problem.

Normal male sexual function can be divided into 5 stages: libido, erection, ejaculation, orgasm and detumescence. Libido or sexual desire is controlled by psychic factors, as well as hormones (androgens). Penile erection occurs following engorgement of blood within the erectile tissue of the penis. At the onset of erection, there is increased blood flow through the arteries of the penis into the erectile tissues. Constriction of the veins draining the penis contributes to the erection. This is

...IMPOTENCE IS A LONELY PLACE....



IMPOTENCE IN DIABETES

Allan S. Hernandez, M.D.
Endocrinologist
De La Salle Medical Foundation

regulated by mechanisms involving higher centers within the brain, neural pathways within the spinal cord, as well as by some hormones in the body. The third phase, ejaculation, is controlled by the nervous system, and consists of seminal emissions (from the prostate and the seminal vesicles), and true ejaculate. The fourth phase, orgasm, is controlled by psychological factors. After the orgasm, there is flaccidity of the penis or detumescence, which occurs as a result of constriction of the

arteries supplying the erectile tissues.

Impotence manifests as any of the following: loss of sexual desire, inability to have and maintain an erection, premature ejaculation, and inability to achieve an orgasm. Patients may manifest with any one of these symptoms, but most patients will have more than one of these complaints. There are many possible causes of impotence, including: endocrine causes such as testicular failure, drugs such as some anti-hypertensive agents

(methyldopa), diseases involving the penis, nerves or the blood vessels.

Impotence in diabetes occurs primarily as a result of involvement of the nerves (diabetic neuropathy) seen in later stages of the disease. As such, there will be other symptoms suggestive of nerve involvement (numbness, decreased sweating, constipation, incontinence,...). There is damage to the nerves regulating the erectile tissues of the penis. Libido is usually preserved, but may be lost in some patients. Likewise, as most of these patients are above 50 years of age, there is also the factor of decreased blood supply as a consequence of generalized atherosclerosis (vascular disease). Drugs such as some of the anti-hypertensive agents, as well as alcohol, may be contributory, and should be looked into in individual cases.

(Continued on page 8)

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Diabetes Mellitus is a disease of carbohydrate, fat and protein metabolism characterized by lack of insulin secretion as in IDDM (insulin dependent diabetes mellitus) or by increased peripheral tissue resistance to insulin as in NIDDM (non-insulin dependent diabetes mellitus) resulting in hyperglycemia and metabolic problems. Up until the present time, management was focused on diet and insulin/oral agents with less emphasis on what exercise can do to the individual. Despite the campaign of the Philippine Diabetes Association to increase physical activity for better sugar control, some still resist the idea



EXERCISE and diabetes

Rosa Allyn G. Sy, M.D.
Endocrinologist
Cardinal Santos Medical Center

of sweating it out daily for varied reasons. Physical activity has scientifically been proven to provide important physiological and psychological benefits for all people, young and old alike and that an exercise program has a key role. In fact, an essential component in the triad of diabetic management - diet, insulin and exercise. Although exercise programs have not been exclusively shown to improve glycemic control in IDDM, they should nevertheless be encouraged to exercise because of the potential to improve cardiovascular fitness and psychological well-being and for social interaction and recreation.

Unlike in IDDM, researches on the effects of exercise on NIDDM have proven its role in lowering of blood glucose level in this group of diabetics. Aside from the previously mentioned benefits of exercise on IDDM, NIDDM gets the additional benefits of reducing body fat and increasing muscle mass with proper exercise.

Despite the long known benefits of exercise, exercise may not be safe for all people with diabetes considering the differences in exercise responses. Therefore, exercise should be

prescribed with caution. The response to exercise in diabetic patients depend upon a variety of factors including the adequacy of control with exogenous insulin or oral medications. If the diabetes is under appropriate control (<240 mg %) or only slightly hyperglycemic without ketosis (as in IDDM), exercise decreases blood glucose levels and less insulin or oral hypoglycemic agents will be required. This is because exercise increases blood circulation and improves glucose transport into the muscle cells. However, problems can arise during exercise if the diabetic is not under adequate control. If there's a lack of sufficient insulin prior to exercise, glucose transport into the muscle cells is impaired and glucose will not be available as an energy substrate. Hence, increasing blood glucose production and further enhancing hyperglycemic state. To compensate for the lack of energy source, free fatty acid use increases and ketone bodies are produced, leading to the development of ketosis. Lastly, since exercise has an insulin-like effect, exercise-induced hypoglycemia (lowering of blood sugar) is the most common problem. Ex-

cise-induced hypoglycemia may result from either too much insulin or accelerated absorption from injection site.

Though exercise in diabetes mellitus is associated with risk, the potential complications of exercise can be minimized if done under supervision using a well-planned exercise program proceeded by a medical evaluation and screening for the presence of vascular and neurologic complications including silent coronary heart disease. Before embarking on any exercise program, it is also advised that patients older than 35 years old should undergo stress electrocardiogram. If no contra-indication exists, the types of exercise a patient performs are a matter of personal preference.

Rhythmic aerobic exercises, e.g. swimming, walking, jogging, cycling, etc, which utilize large portions of skeletal mass for 20-60 minutes are the type of exercises that are recommended. Shorter duration will not produce appreciable metabolic benefits while longer duration results in more musculoskeletal problems. To maximize exercise benefits, it should also be carried out at least 3 days/week

or every other day and if weight reduction is the major goal, daily activity is highly recommended. It is also important to remember that the benefit of exercise is lost 3 days after cessation of the activity. On the other hand, resistance training such as weight lifting, although reported to improve glucose and cholesterol level has been discouraged because of concern that orthopedic and vascular effects might be more common. In patients with peripheral neuropathy, exercises that traumatize the feet such as jogging and running should be limited. Weight lifting should be avoided in patients with high blood pressure and in patients suffering from retinopathy.

To provide a safe exercise program, all activities should be started with a 5-10 minutes of warm-up and low intensity aerobic exercises followed by a 5 minute stretching exercises to prevent musculoskeletal injuries. Each step should be done properly without breath-holding as this can increase systolic pressure due to Valsalva effects. The warm-up phase is followed by aerobic exercise proper for 20-30 minutes of moderate intensity

(Continued on page 7)

Exercise...

(From page 6)

to achieve optimum cardiovascular benefits. Any program should be ended with a post-exercise cool-down for at least 5-10 minutes to reduce the risk of hypotension and other cardiovascular and musculoskeletal complications. For runners and joggers, it should consist of walking; for cyclists, it should be pedaling with no or low resistance.

Occasionally, it is easy to convince people to start an exercise program but difficult to keep them on it. To improve compliance, make exercise enjoyable, near a convenient location with positive support from both the family and medical personnel. In general, the key to a successful exercise prescription is individualization, in much the same way as are the meal plan and insulin therapy.

In a nutshell, exercise is beneficial for all diabetics, but if not done properly, one places oneself as potential risks. To maintain a safe exercise, certain special precautions should be followed: 1. proper footwear and other equipment as dictated by the exercise should be used; 2. carry an identification bracelet identifying you as a diabetic; 3. exercise with a friend; 4. feet should be inspected daily and after exercise; 5. exercise during periods of good sugar control >80 mg% and <240 mg%; 6. take sufficient fluids to avoid dehydration; 7. monitor sugar level before and after exercise; 8. adjust insulin dose or increase carbohydrate intake by 10 gms to as much as 50 gms depending on the duration of exercise; 9. Be knowledgeable of the signs and symptoms of hypoglycemia which commonly occurs 4-10 hours after exercise; 10. exercise 1-3 hours after meals when sugar level is above fasting level.

The phenomenon and the management:

EARLY MORNING HYPERGLYCEMIA

Laura Trajano-Acampado, MD
Endocrinologist
UP-PGH Medical Center

One of the more difficult problems in managing patients on insulin is determining the proper adjustment of insulin dose when the early morning or prebreakfast blood glucose level is elevated. The most common impulse is to increase the insulin dose. But before you attempt to do this, may I invite you to continue reading.

Causes

There are several causes of early morning hyperglycemia or high blood sugar, and these include:

Somogyi Effect - Patients on insulin may develop nocturnal hypoglycemia or low blood sugar at night, which may stimulate a surge of counterregulatory hormones producing high blood glucose levels by 7:00 AM. It has been shown that by reducing inappropriately high doses of insulin, hyperglycemia on the following morning may improve substantially.

Dawn Phenomenon - This phenomenon occurs in as many as 75% of IDDM patients and in most NIDDMs and normal subjects as well. It is characterized by reduced sensitivity to insulin developing between 5:00 AM and 8:00 AM. It is suggested by recent evidence that this phenomenon is evoked by spikes of growth hormone released hours before, at the onset of sleep. When the dawn phenomenon occurs alone, it may produce only mild early morning

	Blood Glucose (mg/dl)		
	10:00 pm	3:00 am	7:00 am
Somogyi effect (S.E.)	90	40	200
Dawn phenomenon (D.P.)	110	110	150
Waning of insulin + D.P.	110	190	220
Waning of insulin + D.P. + S.E.	110	40	380

hyperglycemia. However, when it is associated with the Somogyi effect and/or the waning phenomenon, the hyperglycemia may be more severe.

Waning of Circulating Insulin Levels - This is probably the most common cause of prebreakfast hyperglycemia. In this case, more rather than less insulin should be given in the evening.

The above mentioned causes of early morning hyperglycemia are not mutually exclusive. If they occur together, more severe hyperglycemia occurs.

Diagnosis

Diagnosis of early morning hyperglycemia may be facilitated by self monitoring of blood glucose at 3:00 AM in addition to the usual bedtime and 7:00 AM measurements. The following are typical patterns of overnight blood glucose levels in early morning hyperglycemia due to the various cause (See Table):

Treatment

When a particular pattern

is noted from monitoring blood glucose levels overnight for a few nights, appropriate therapeutic levels can be taken. The Somogyi effect can be treated by reducing the dose of intermediate insulin at dinnertime, giving a portion of it at bedtime, or supplying more food at bedtime. When the dawn phenomenon alone is present, the dosage of insulin can be divided between dinnertime and bedtime. When insulin pumps are used, the basal infusion rate can be increased from 6:00 AM until breakfast (e.g. from 0.8 unit/h to 1 unit/h). If the cause is waning insulin levels, either increasing the evening dose or shifting it from dinnertime to bedtime, or both, may prove effective.

Conclusion

Thus it can be seen from the above discussion that not all elevations of early morning blood sugar levels are due to inadequate doses of insulin. So before you increase the doses of your patient's insulin, do find out the cause first so that the appropriate therapeutic measures may be undertaken.

Ma. Honolina S. Gomez, MD
Endocrinologist
UST Faculty of Medicine

PATIENT EDUCATION CORNER



Do you know that

With the estimated 4.2 million diabetics in our country, there's a total of 42 million diabetic toes out there. Less those lost to amputation, but enough to keep every family practitioner, internist, surgeon and diabetologist busy for a lifetime.

And more problems are expected in the future. With a 6% per year growth rate of the diabetic population, and doubling every 15 years, there will be 8 million diabetics by the year 2,000 in the Philippines with 16 MILLION DIABETIC FEET!

Furthermore, we are confronted with an aging diabetic population. Ninety percent of our diabetic population is over age 50 and MOST foot problems occur after age 50.

The most feared complication befalling a diabetic is the loss of a leg. It frequently results in the loss of a job, decreased income and loss of the quality of life. Often overlooked is the effect of amputation on the patient's sex life both aesthetically and functionally.

One should know that it is not the high blood sugar itself that destroys a foot, but either the lack of blood supply or the failure of sensation.

The breakdown of the foot in the diabetic is commonly due to a combination of neuropathy (loss of sensation) and infection, with or without impaired blood supply. Decreased blood supply causes poor healing by preventing adequate delivery of oxygen, nutrients and antibiotics to the infected areas.

Normal people take care of their hands and feet because they are constantly reminded by pain when they do things wrong. An insensitive limb feels like a wooden block fastened to the body. It is a deep rejection of a "dead part."

An insensitive diabetic foot is not really very much weaker than a normal foot, it is just more poorly protected because of absent pain reflexes.

How can a foot be damaged?

A foot can be damaged in three ways;

...a constant pressure as from a tight shoes

...a much higher pressure causing direct mechanical damage, as when a foot lands on a sharp stone, broken glass or a thumb tack.

...constant repeated moderate pressure at every step resulting inflammation, followed by blister formation then an ulcer.

The first bastion of defense for the diabetic foot is an awareness by the patient and the physician that a problem exists.

What to look for

Be able to recognize the symptoms due to lack of blood supply:

- . intermittent claudication (pain on walking, usually in calf, relieved by stopping)
- . night pain or pain by lying down (made worse by walking; relieved by dangling feet)
- . slow healing of cuts and scratches
- . shiny appearance of skin
- . loss of hair on foot and toes
- . thick nails, often with a fungus
- . gangrene

The symptoms due to decreased sensation include:

- . abnormal sensations or sensitivity
- . pain (severe, shooting or knifelike, often severe at night, maybe relieved by walking)
- . heavy callus formation
- . ulcers
- . infection
- . change in shape of foot
- . decreased ability of the foot to perspire (impaired autonomic nervous system). This leads to dry, scaly skin which can crack and become infected.

OBEY the general rules of good foot care!

Avoid injuries to your feet!

Do not smoke.

Don't wait for your feet to hurt.

Check your feet every day.

Keep your feet clean.

"These are your feet, they are good feet but they do not warn you as often people get warned, so you have to baby them and clean them yourself". (Brand & Coleman: Diabetes Mellitus, Theory & Practice, 4th ed., 1991)

Impotence... (From page 5)

Impotence in diabetes develops gradually over a period ranging from a few months to several years. At first, the patient experiences difficulty in achieving erection until such time that it can no longer be achieved at all. Masturbation, likewise, is affected, and most patients will lose "nocturnal tu-

mescence," exemplified by loss of morning erection. The latter characteristic is an important distinguishing feature to differentiate organic causes of impotence such as diabetes, from psychogenic causes. Retrograde ejaculation, manifested by the presence of sperm in the urine, may also occur.

(Continued on page 9)

Impotence ... (From page 9)

Investigation of impotence involves exclusion of hormonal or endocrine causes. Hormonal causes usually present with a lot of other manifestations and are therefore ruled out easily. Drug causes should also be ruled out. Evaluation of neurologic, and vascular causes may involve some tests including stimulation tests, nocturnal tumescence test, and measurements of response of the nerves to stimulation.

The treatment of impotence secondary to diabetes is notoriously frustrating. There have been some reports of symptomatic response to drugs such as "aldose-reductase inhibitors." There are mechanical devices, which are essentially vacuum devices, which may be helpful for some patients. Alternatively, prosthetic implants, which consist of silastic implants or inflatable devices, may be resorted to. It would be well to keep in mind, however, that both the mechanical devices, and the surgical implants, are not without risks. Complications have been reported, including gangrene of the penis following the use of these methods.

Diabetes Workshop....(From page 1)

Therapeutics, Becton-Dickinson, Boehringer Mannheim, Bristol Myer Squibb, Eli Lilly, E. Merck, G.D. Searle, Hoechst-Zuellig, Johnson and Johnson, Novo Nordisk, Parke Davis, Pharmacia-FICE, Servier Philippines and Wyeth Suaco.

Lecturers are: Dr. Lina Lantion-Ang, Dr. Tommy Ty Willing, Dr. Rosa Allyn Sy, Dr. Mary Anne Lim-Abraham, Dr. Ma. Honolina Sero-Gomez, Dr. Cynthia Chua-Ho, Dr. Augusto D. Litonjua, Dr. Ruby Go and Dr. Roberto Mirasol.

FIGHT DIABETES



Participants of the Third Training Course for Diabetes Education in a parody of Sister Act during the closing ceremonies.

THIRD TRAINING COURSE FOR DIABETES EDUCATORS

The 3rd Training Course for Diabetes Educators of the Diabetes Center was held last April 11 to 16, 1994 at the Metropolitan General Hospital and the Makati Medical Center.

Participants to the course who were conferred the title, Assistant Diabetes Educator, included:

Metropolitan General Hospital - Alfea Lacierda, MD, Fely Jane Ong, RN, Natalia Almera, RND.

University of Sto. Tomas Hospital - Jane Doctora, MD, Rosalyn Almazan, RN, Virna Reyes, RND.

United Doctors Medical Center - Eric Anthony Cabrera, MD, Mercelita Albano, RN, Sheilyn Pura Chacon, RND.

Dr. Anillo General Hospital, Batangas - Rosalina Anillo, MD, Charina Concepcion Carpio, RN, Maribel Contreras, RND.

Elisa R. Ochoa Hospital, Butuan - Teresita Busico, MD, Vilma Santos, RN, Fe Honculada, RND.

Bethany Hospital, La Union - Marielyn Bucaneg, MD, Teresita Sapitula, RN, Lucy Flores, RND.

Dela Salle University Hospital, Cavite - Warner Camarao, MD, Marites Bayot, RN, Joy Esguerra, RND.

The program activities included the participation of Ms. Marie Gil, nurse educator from

the International Diabetes Institute (IDI), Australia who shared with the group her expertise in teaching diabetic patients. For ten years now, she has been planning and developing educational programs for people with diabetes.

The closing ceremonies heard the trustees of the Diabetes Center give inspirational talks to the graduates; Dr. Raul G. Fores, medical director of the Makati Medical Center and Mr. Rolland Thompson, treasurer of the Diabetes Center. Mr. Ron Raab, coordinator and public relations manager of the IDI was the guest speaker. He outlined the donor program of the IDI for insulin and glucose testing materials which are given free to indigent patients.

The faculty of the Third Course saw the introduction of the additions to the Medical Bureau of the Diabetes Center, e.g., Dr. Roberto Mirasol, Dr. Josephine Carlos-Raboca, Dr. Cynthia Chua-Ho, Dr. Cynthia Halili-Manabat, Dr. Laura Trajano-Acampado and Dr. Rosa Allyn Sy.

Others who lectured were: Dr. Lina Lantion-Ang, Dr. Tommy Ty Willing, Dr. Ma. Honolina Sero-Gomez, Dr. Ruby Go, Dr. Susan Yu Gan. Ms.

AUSTRALIAN EDUCATORS VISIT MANILA

Mr. Ronald Raab, Coordinator of the Emergency Insulin Distribution Program and Ms. Marie Gill, a nurse educator on Diabetes, both from the International Diabetes Institute of Australia visited Manila last April 10-19, 1994.

DIACARE, an affiliate lay organization of the PDA and IDI's arm in the Philippines, arranged the 10-day schedule of the visiting delegates.

During their visit, they attended 3 days of the 6-day Diabetes Education Training Program of the Diabetes Center. They also met with other agencies like the Philippine General Hospital, World Health Organization, Commission on Filipinos Overseas, Les Laboratoires Servier, Philippine Association of the Sovereign Order of Malta and the Australian Embassy. They also had meetings with Dr. Augusto Litonjua, President of the Philippine Diabetes Association and members of DIACARE who are primary beneficiaries of their insulin donations.

The main purpose of their visit was to pinpoint the areas in Diabetes Education that they can lend their expertise and extend their assistance to. They also wanted to strengthen ties with the agencies assisting DIACARE in bringing in the country the medical supplies for indigent diabetics.

Mr. Ronald Raab first visited Manila in January of 1993 where he met with the recipients of their first donation which came through in May 1992. Mr. Joby Belmonte, President of DIACARE, has expressed his appreciation for the

(Continued on page 10)

Susan B. Trinidad, Ms. Ma. Imelda Cardino and Ms. Nora Makalintal.

The 4th Training Course is slated for October this year.

Fun Run to Usher in Diabetes Awareness Week

A fun run from the International Convention Center to the Quirino Grandstand to be participated in by several invited groups will usher in the 1994 Diabetes Awareness Week on Sunday, July 31, 1994. President Fidel V. Ramos, Secretary of Health Juan Flavio, and Manila Mayor Alfredo Lim have been invited to spearhead the run which will end at the Luneta where a short program will be held.

During the Week, television quiz shows, cartoon contests, blood sugar testings, lectures on diabetes and free clinics will be held daily in participating hospitals. Planning the activities is the working committee composed of prominent personalities, such as Mrs. Lovely Romulo, Mr. Tony Mercado, Mrs. Remy Fournier and Mr. Ben Domingo. The medical side is represented by Dr. Jojo Carlos-Raboca, Dr. Honee Gomez and Dr. Augusto D. Litonjua. Ms. Ebo Adorable is the executive

Introduction

A few days ago, I addressed the nation not only to report what we had achieved this past year but also to propose an agenda for our future as a nation and as a society.

In that report, you will recall that among all our public service programs in government, we have reason to be proud of our national health care program.

In particular, I cited our initial successes in the delivery of extensive immunization, improved nutrition, and environmental sanitation.

Poverty--The Root of Disease

Poverty is at the root of our people's health deficiencies. Low-income families who are unable to receive proper nutrition and medicine are particularly vulnerable to various kinds of diseases. Poor mental and physical strength, slow response

director. Several committees are being formed to handle the various activities.

Editor's Note: Diabetes Watch takes pride in publishing for the first time, the speech of President Fidel V. Ramos on the occasion of the launching of the first Diabetes Awareness Week last year. The message is still apropos one year later.

IMPROVED HEALTH CARE THROUGH EDUCATION

Speech of His Excellency
President Fidel V. Ramos
Diabetes Awareness Week
Heroes Hall, Malacañang
July 29, 1993

time, and lack of energy are but a few manifestations from people with health disorders.

In our country, 2.6 million suffer from diabetes, 14% of our pre-school children suffer from growth and weight disorders, and 37% of our people lack iron in their daily diet. Malnutrition and other health disorders re-

main a great challenge in our fight against poverty and deprivation. Most of us only get to know about an ailment when we get affected by the disease. Such ailments could be easily prevented if only people are properly and constantly informed about them.

In order to address these

Australian... (From page 9)

IDI's concern for the Filipino indigent diabetics and vowed to continue the good relationship they have started in 1992. This will not only benefit DIACARE members, but also help in providing medicine to indigent diabetic patient in Silay City in Bacolod, the Philippine General Hospital, DEAR Foundation and indigent patients of the National Consortium of Diabetes Clinics.

Midyear... (From page 1)

and Dr. Roberto Mirasol.

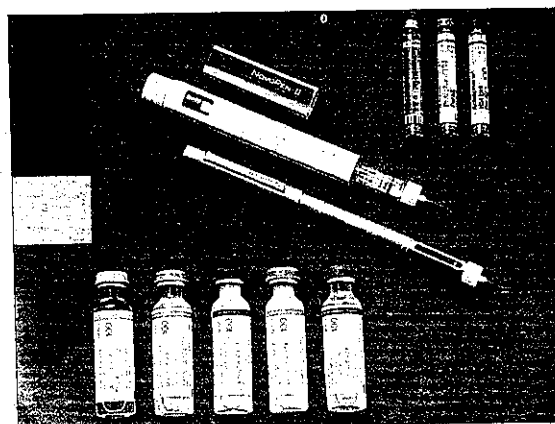
Moderators for the different sessions are: Dr. Joselynn Anel-Quimpo, Dr. Lina Lantion-Ang, and Dr. Ricardo Fernando, Master of Ceremonies will be Dr. Mary Anne Lim-Abraham and Dr. Rosa Allyn Sy.

Coordinating the preparations are Dr. Guadalupe L. Juguilon, president of the Baguio-Benguet Chapter and her members.



Contrary to popular myth, Moby Dick was not responsible for the loss of Captain Ahab's foot. He had diabetes.

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all the way and I hope that many more double projects can be initiated by my administration to help in hastening our drive to improve health care all over the country.

Closing

Let me just close by commending all of you who have selflessly dedicated your time and effort for this cause. I encourage all of you now to exert more effort in letting people know about diabetes, what can be done to prevent it, and who to approach if symptoms of the disease appear.

I am sure that our people, especially in the countryside, will not only appreciate your efforts but also owe it to you if they lead a healthy life that can empower them to be productive and contribute to our national development.

Let us move onward to Philip-pines 2000!!! and put diabetes out of its way.

*Mabuhay kayong lahat!
Salamat sa inyong lahat!*

remains on top of the list because this is the most economical way to reduce the number of health related cases in our country.

Just recently, we implemented the National Immunization Day Program where some 10 million children received anti-polio vaccines. At around the same time, I also gave my full support to all health workers by approving the implementing rules for R.A. 7305 or the Magna Carta for Health Workers.

And last Friday, I signed Proclamation No. 213 declaring the 4th week of July of every year Diabetes Awareness Week. Today I promulgate Proclamation No. 213-A to authorize your foundation to have the opportunity to make people aware of the risks and consequences of diabetes.

I assure you that government will be behind your project.

Manila Area and I commend your efforts to help poor urban dwellers fight diabetes. But the real need for this is in the rural areas. Many of our people in those areas do not know much about diabetes and hence, are prone to this disease. Yet if they acquire it, they unfortunately do not have the financial resources to undergo treatment from this disease.

PCDEF--Advocate for Education in Health Care

Your organization, the Philippine Center For Diabetes Education Foundation (PCDEF) whose thrust is to provide an intensive education program on diabetes, complements very well government's program of health education for our people. By training personnel who will man where it is today.

Government--Our Share in Health Care

Under my administration, our Health Department has launched a number of programs to address our people's health concerns. Emphasis on preventive and educational health care

Your partners in total diabetes care



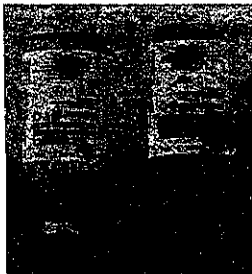
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EDITORIAL COMMENT

The Importance of Good Diabetes Control

LINA C. LANTION-ANG, M.D.
Endocrinologist
Polymedic General Hospital

Diabetes Mellitus has been labelled by the WHO as the world's most prevalent metabolic disorder. In the Philippines, majority of the more than two million diabetics belong to this group.

The impression that Non-Insulin Dependent Diabetes Mellitus (NIDDM) is a mild disease no longer holds true since the patients have twice the risk of developing Coronary Artery Disease (Heart Attacks), a four fold increase in leg amputations from diabetic gangrene, not to mention the expense incurred when these complications set in

(hospitalizations, cost of surgery, laser treatment to the eye, dialysis and loss of man-power).

While the above chronic complications are considered the most dreaded, two other acute complications often missed in NIDDM are Hyperosmolar Non-ketotic Coma (very high blood sugar but minimal ketones) and Hypoglycemia (low blood sugar) from sulfonylurea tablets. There can be high morbidity and mortality rates in either conditions since the patients affected are usually older and have other concomitant cardiovascular or kidney disease.

The chronic complications do not come on overnight and it takes years of poor control for these complications to develop, so that there is ample time for the patient and the diabetes health care team (physician, nurse, dietician) to work closely in achieving as near-perfect diabetes control as possible. Metabolic control entails normaliza-

tion of the blood sugar, keeping trim and active (regular exercise to maintain desired body weight and fitness), eating the right kind of food in their proper proportions, size and time, and avoidance of smoking and alcohol.

The patient and his doctor share responsibilities in achieving and maintaining excellent diabetes control. The patient plays an active role in monitoring his blood/urine sugars, weight, foot inspection, and compliance regarding diet and exercise. The doctor on the other hand, guides the patient in adjusting insulin dose, in monitoring lipid profiles, in evaluating the eyes, heart, kidneys and other organ system of the diabetic patient.

Applying the favorable results of the recently concluded Diabetes Control and Complications Trial (DCCT) to NIDDM patients means that with good metabolic control, the complications of the disease can be

(Continued on page 2)



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For the 8 to 5 people who need to live normal lives despite the problem of insulin resistance in NIDDM

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PRESCRIBING INFORMATION: Composition: Glucophage Forte is an oral anti-hyperglycemic white tablet containing 850 mg Metformin Hydrochloride. Pharmacologic Actions: Studies have shown that Glucophage Forte produces its hypoglycemic action by: retarding glucose absorption from the gut; increasing insulin receptor sites on the cell membrane; improving insulin-stimulated glucose disposal in Type II diabetes in the extrahepatic tissues without an effect on insulin-binding capacity on circulating erythrocytes and monocytes; enabling the diabetic to make use of the available endogenous insulin; increasing the peripheral utilization of glucose; lowering the high plasma levels of insulin, cholesterol, triglycerides and pre-B lipoproteins. Glucophage Forte has no significant hypoglycemic effect in non-diabetic subjects. It may be used alone or in conjunction with sulphonylurea or with insulin. Absorption and Fate: Glucophage Forte is incompletely absorbed from the gastrointestinal tract and is excreted unchanged in urine. It is not protein bound in plasma or metabolized. Indications: Oral-treated non-insulin dependent diabetic patients, especially if overweight; alone as initial therapy or in combination with a sulphonylurea. Occasionally as adjunctive therapy in insulin-dependent diabetic patients not well controlled on insulin. Dosage and Administration: It is important that Glucophage Forte should be taken in divided doses with meals 850 mg tablets 2-3 per day, N.B. in combination therapy with either a sulphonylurea or insulin, diabetic control should be checked by blood sugar readings, because of the possibility of hypoglycemia. 1) The dose should be increased gradually. One 850 mg tablet, two times a day is often enough to give good diabetic control. This may be achieved within a few days, but it is not unusual for the full effect to be delayed for up to two weeks. If control is incomplete a cautious increase in dosage to a maximum of four 850 mg tablets is justified. Once control has been obtained it may be possible to reduce the dosage. 2) Combined with sulphonylurea therapy which is not giving adequate control, one 850 mg tablet should be added initially, the dosage of Glucophage Forte being gradually increased until optimal control is obtained. Often, sulphonylurea may be reduced and in some patients withdrawn. Glucophage Forte can be continued as the sole therapy. Contraindications: Diabetic coma and ketoacidosis. Impairment of renal function. Chronic liver disease. Cardiac insufficiency. Cardiac failure. Recent myocardial infarction. Alcoholism (acute and chronic). Conditions associated with hypokalemia. States associated with lactic acidosis such as shock, pulmonary insufficiency, and history of lactic acidosis. Precautions: Glucophage Forte is excreted by the kidney and care is consequently necessary in patients with decreased renal function. This may be particularly relevant in very elderly patients. Although pharmacologic investigation has revealed no evidence of any teratogenic effect, the use of Glucophage Forte is not advised in pregnancy, unless there are compelling reasons for its use. It is used with caution in conditions which may cause dehydration; in patients suffering from serious infections or trauma, in those undergoing surgery; and in conditions which may cause dehydration and certain investigations such as intravenous urography and intravenous angiography. Glucophage Forte therapy should be stopped 2-3 days before these events and be restarted only after renal function has been restored. It is prudent to stop Glucophage Forte temporarily if any of the above conditions exist, particularly if gastrointestinal disturbances are noted or acidosis is suspected. After ketoacidosis and lactic acidosis have been excluded, Glucophage Forte treatment may be resumed if renal function is not impaired. Patients receiving continuous metformin therapy should have annual estimations of Vitamin B12 in view of reports of decreased Vitamin B12 absorption. Glucophage Forte therapy with sulphonylurea or insulin should be monitored by blood sugar readings because combined therapy may cause hypoglycemia. It is decided to stabilize diabetic patients with Glucophage Forte and insulin therapy. It is recommended that this be carried out in a hospital because of the possibility of hypoglycemia until the correct ratio of the two drugs is determined. As with a number of drugs, interaction between Glucophage Forte and anticoagulants is a possibility. Thus, patients receiving the two drugs may need adjustment of the anticoagulant dosage. Side effects: Glucophage Forte is well tolerated, however, gastrointestinal upsets which are usually minor and transient may occur. These are avoided by taking Glucophage Forte with meals (which is always recommended). Occasionally a temporary lowering of the dose may be needed. Only 3% of patients have discontinued Glucophage Forte therapy because of this complication. Therefore, it is important that treatment is not abandoned on the first sign of intolerance since this has been found to resolve spontaneously and it is usual for gastrointestinal upsets to disappear within the period during which diabetic control is achieved. It is unusual for them to return and if such symptoms occur an alternative reason should be sought. Adverse actions: Lactic acidosis is a serious and often fatal metabolic complication which has been reported in a number of diseases including diabetes. It is characterized by acidosis (decreased blood pH), electrolyte disturbances with an increased anion gap and an increased lactate level with altered lactate/pyruvate ratio. Acetaminophen may also be present. Lactic acidosis often has an insidious onset and non-specific symptomatology. Marked anorexia or unexplained weight loss may indicate the onset and precede the full clinical manifestations of lactic acidosis presenting with nausea, vomiting, hyperventilation, malaise and/or abdominal pain in the majority of cases. Patients with these early symptoms have not been investigated for lactic acidosis. In patients with metabolic acidosis lacking evidence of ketoacidosis (ketonuria and ketonemia) lactic acidosis should be suspected. Lactic acidosis is a medical emergency which must be treated in a hospital immediately. Certain cases of lactic acidosis reported with Glucophage Forte therapy have occurred in patients with complications including the contraindications. The problem of lactic acidosis with Glucophage Forte is negligible provided that patients are correctly selected and attention paid to correct diet and dosage. Glucophage Forte may be secreted into breast milk but amounts are considered to be negligible. Overdosage: Signs and symptoms: Hypoglycemia is not normally a problem encountered with Glucophage Forte when used alone (thy tablets have been ingested with no untoward effects on blood sugar). In combination therapy with a sulphonylurea or insulin or with alcohol hypoglycemia can occur. In excessive dosage and particularly if there is a possibility of accumulation, lactic acidosis should be suspected. Some of the signs and symptoms suggestive of this condition are nausea, diarrhea, abdominal pain and dizziness. Overdosage-Treatment: Intensive supportive therapy is recommended which should be particularly directed at correcting fluid loss and metabolic disturbance. Pharmaceutical precautions: Store at controlled room temperature. Package quantities: Stripped tablets in boxes of 100 tablets. Full product information available upon request.

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