

Metformin nearing centenary: How to stem tide of misinformation



**Dr.G.Ganesan, general practitioner. For contact:
gganesan95@gmail.com**

As you might know, a majority of diabetics have been taking metformin for a long time. It is metformin which has been the most prominent of drugs prescribed by doctors for diabetic patients in the world countries for over a half-century. According to the Data Bridge Market Research, the sale of metformin has been increasing globally by six per cent, driving home the significance of this drug.

Meanwhile, metformin has been targeted by lots of misinformation in social media, causing ripples in the medical world.

Discovery of metformin

In the Medieval Age, the leaves known as *galega officinalis*, which used to be fed to goats in Europe, were also used as herbal medicine as part of treatment of fever among the people. Two scientists - Werner and Bell – discovered the presence of the chemical called biguanide in the herb. They produced metformin from the chemical, not knowing that the medicine had properties controlling diabetes.

Anti-virus medicine

Some scientists administered metformin to a few rabbits and found their glucose level coming down and also discovered the anti-viral qualities of the medicine. So, the medicine was used to contain the epidemic of influenza in Philippines in 1947 and then it was discovered that the medicine helped reduce the patients' sugar level. However, till 1955 metformin was used as an anti-viral medicine.

Medicine for Type-1 diabetes

It was French doctor Jean Sterne, who officially and categorically declared that metformin could be used as a drug for containing diabetes. Consequently, he introduced it in the name of Glucophage in the market. Later, in 1958 the medicine was introduced in India too. Its use had since spread to all world countries. Though in the past 50 years various diabetic drugs have been in use, metformin has remained front and center as a drug for Type-I diabetes.

What are reasons?

As you might know, it is deficiency in insulin secretion which is primarily responsible for diabetes. There are two types: Type-1 Diabetes Mellitus and Type-2 Diabetes Mellitus. The Type-I afflicts the patients, particularly children, who have a total lack of insulin secretion. They have to be administered insulin life-long as no drug is useful.

On the other hand, there are Type-2 patients, particularly the overweight, whose insulin is secreted less. Even the less quantity of insulin is prevented by cells from functioning properly. This condition is known insulin resistance. As a result, the patients' sugar level goes up. A drug was needed to tackle the insulin resistance. It was metformin which is available as a separate drug or in combination now.

In practice, metformin is an insulin sensitizer which arouses the insulin receptors dormant in the cells in the fatty tissues and muscles of bones and enables insulin to enter into cells. Thus, insulin functions properly. The excess glucose stagnating in blood enters into cells and gives the body energy. Then the sugar level in blood comes down.

Special features

Compared to all modern diabetic drugs, it is metformin which is the best for those in the initial stage of diabetes. It helps reduce body weight and safeguards heart. As it does not affect the baby in the womb, it is recommended even for the pregnant diabetics. Besides, metformin is prescribed for young women with polycystic ovary syndrome (PCOS).

Generally, if the dose of diabetic medicine is increased or if the patients do not eat properly, they tend to sweat profusely and even swoon. This condition is called in medical parlance hypoglycemia. But metformin keeps the sugar level balanced in blood and so hypoglycemia will not arise. Besides, metformin is affordable in terms of cost and does not cause side-effects.

Increased life-span

According to a survey done by the International Diabetes Federation, there are 53.66 crore people afflicted with Type-2 Diabetes Mellitus, of whom 90 per cent are using metformin which controls sugar level, also averting complications such as cardiac arrest, paralysis, loss of vision, kidney failure and so on.

Metformin's role is undoubtedly immense in increasing and improving life-span and lifestyle of diabetics in the past 50 years.

Mischievous video

While the world countries are celebrating the metformin for its immense benefits, a video produced in the name of an endocrinologist and purported to advertise some Ayurvedic drug for controlling diabetes has been doing the rounds in social media, terrorizing the users of metformin. It is noteworthy that the photograph of the medical researcher in the ill-meaning video is fake and the ideas it disseminates are false.

It is a given that it is only false information and fake news which are spreading faster than truth in the society. So, it is a matter of grave concern that the viewers of the fake video, if gullible, are likely to get confused over whether to use metformin or not. The government cannot wash its hands off it, attributing the problem to the lack of awareness among the people. It must devise ways and means to stem the tide of misinformation dished out by the fake videos produced with the help of technology.

It is not only sicknesses but also shams which have to be put down with an iron hand.

Translated by V. Mariappan.