Drug Information Bulletin

Drug Information Centre (DIC)
Indian Pharmaceutical Association
Bengal Branch
Tele fax: 033 24612776, E-mail: ipabengal.dic@gmail.com
Web Site: http://www.ipabengal.org
Contact: 09830136291

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Content

Editorial

Experts have expressed their concern about the quality of drugs at the point of consumers considering the stability point of view. It is a great concern about the stability as there is no control on storage conditions at the drug stores, transporters' godown and during the transport by different modes of transport.

It is really a paradox that the drugs are being manufactured following stringent norms to produce quality drugs, but there is hardly any control on storage conditions after it comes out of the store of the manufacturers. Though there are some stipulations in the legislation regarding storage at the licensed drug store, it is rarely followed and there is no control during transport and storage at the transporters godown.

This situation leaves scope for entry of spurious drugs in the supply chain and deterioration of the drugs due to storage under improper conditions. Considering this situation CDSCO has developed Good Distribution Practice (GDP) Guidelines of Biologicals and is in the process of framing guidelines on other than Biologicals.

In this situation experts feel that in order to ensure quality and to reduce scope of spurious drugs GDP for all categories of drugs are to be developed and made mandatory by suitable amendment of the Drugs & Cosmetics Act and Rules.

Dr. Subhash C. Mandal
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New Drug: Clevidipine

Approved indication: hypertension
Cleviprex (The Medicines Company)
glass vials containing 25 mg/50 mL and 50 mg/100 mL
Australian Medicines Handbook section 6.3.5

Occasionally, patients present with a hypertensive crisis which requires their blood pressure to be rapidly reduced. Controlling hypertension is also vital in patients having cardiac surgery.

Clevidipine is a short-acting intravenous dihydropyridine calcium channel blocker. In perioperative patients, the blood pressure is reduced by up to 5% within 2–4 minutes of starting an infusion. Clevidipine is rapidly metabolised and has a terminal half-life of 15 minutes. Its effect on blood pressure is gone within 5–15 minutes of stopping the infusion.

Six different doses of clevidipine were tried in a placebo-controlled study of 91 patients who had undergone cardiac surgery. The proportion of patients whose blood pressure reduced in response to clevidipine increased with the dose. Despite blood pressure falling by at least 10% there was no significant change in heart rate although beta blocker use was not controlled for.1

The ESCAPE trials enrolled patients having cardiac surgery. In ESCAPE-1, 152 hypertensive patients were randomised to receive clevidipine or a placebo infusion before surgery. The target blood pressure was reached in a median of six minutes with clevidipine. Treatment only failed in 7.5% of the patients given clevidipine compared with 82.7% of the placebo group.2 ESCAPE-2 assessed the effect of clevidipine on postoperative hypertension. After surgery 110 patients were given clevidipine or a placebo. Only 8.2% failed to respond to the drug compared with 79.6% of the placebo group. The median time to reach the target blood pressure with clevidipine was 5.3 minutes.3

The ECLIPSE trials were safety studies, but also reported on blood pressure control. They compared clevidipine with nicardipine, sodium nitroprusside and glyceryl trinitrate in 1512 hypertensive patients having cardiac surgery. Clevidipine was significantly more effective than sodium nitroprusside and glyceryl trinitrate at keeping the blood pressure within a target range. There was not a significant difference between clevidipine and nicardipine for the specified range.4

Clevidipine has also been used to control acute severe hypertension. In an open-label trial, 131 people who presented with a systolic blood pressure above 180 mmHg or a diastolic blood pressure above 115 mmHg were given an infusion of clevidipine for at least 18 hours. The dose was titrated to keep the blood pressure within a target range. That range was reached within 30 minutes by 88.9% of the patients. Most patients were able to switch to oral therapy within six hours of stopping clevidipine.5

Patients who are not given oral antihypertensives need monitoring, after prolonged infusions, for at least eight hours after the infusion stops. This is because of the risk of rebound hypertension. More common adverse effects of clevidipine in severe hypertension are headache, nausea and vomiting. Some of the adverse effects of clevidipine can be anticipated from its action. These include hypotension, tachycardia and a negative inotropic effect which can exacerbate heart failure. In perioperative use there are reports of

atrial fibrillation.2,3 In ESCAPE-1, 9.4% of the patients developed acute renal failure compared with 2% of the placebo group.2In the ECLIPSE trials, the overall incidence of death, myocardial infarction, stroke or renal dysfunction at 30 days was similar for clevidipine and its comparators.4

Clevidipine is presented as an emulsion containing phospholipids. It is contraindicated in patients who are allergic to egg and soy products. Severe aortic stenosis is also a contraindication.

Clevidipine is likely to be more expensive than the drugs currently used to reduce blood pressure urgently, and it may be no safer overall. Although there were fewer deaths than with sodium nitroprusside, clevidipine did not reduce the overall rate of death, myocardial infarction, stroke or renal dysfunction significantly more than its comparators.4

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Source: Australian Prescriber

Europe failing to tackle drug-resistant Tuberculosis

Cases of tuberculosis are falling in Europe but a failure to properly diagnose and treat dangerous drug-resistant strains of the contagious disease means it is far from under control, health experts said on Tuesday.

Every day, almost 1,000 people across the 53 countries of the World Health Organization's (WHO) European region fall sick with TB, and multidrug-resistant (MDR) and extensively drug-resistant (XDR) TB pose a serious risk to the goal of eliminating it by 2050, the experts said.

Data from the European Centre for Disease Prevention and Control (ECDC) and the WHO's regional office showed that drug-resistant TB strains affect at least 76,000 people in the region. But more than half are not properly diagnosed and only one in every three patients is successfully treated.

At 25 percent, the treatment success rate for XDR TB patients is even lower.

Treating even regular TB is a long process. Patients need to take a cocktail of antibiotics for six months and many fail to complete the treatment - fuelling growing drug resistance.

"We must reach all patients, not only half of them and 'half the way'", said Zsuzsanna Jakab, the WHO's regional director for Europe.

She said there was now an urgent need for new anti-TB medicines with shorter and more effective treatment courses that patients would be more able and more likely to stick to.

Often mistakenly seen as a disease of the past, TB has over the last decade developed into one of the world's most alarming public health threats with the emergence of drug-resistant or "superbug" strains that can't be treated even with numerous drugs.

Of all infectious diseases worldwide, only HIV - the human immunodeficiency virus that causes AIDS - kills more people.

Once known as the "white plague" for its ability to render its victims skinny, pale and feverish, TB causes night sweats, persistent coughing, weight loss and blood in the phlegm or spit. It is spread through close contact.

Drug-resistant TB is a manmade problem and has developed because regular TB patients were either being given the wrong medicines or the wrong doses, or because they were not completing their treatment.

The WHO, which declared TB a global emergency in 1993, says up to 2 million people worldwide may be infected with drug-resistant strains by 2015.

Marc Sprenger, director of the Stockholm based ECDC which monitors disease in the European Union, said treating regular and MDR TB successfully was the only way to stop more dangerous and more highly resistant strains from developing.

"If we are not able to diagnose and treat patients with multidrug-resistant tuberculosis early and successfully, this not only puts patients' lives at risk but also paves the way for XDR TB," he said in a statement as the new data were published.

The WHO European Region comprises 53 countries, with a population of nearly 900 million people. The ECDC/WHO data showed an average annual 5.0 percent decline in TB incidence across the region over the last decade.

Source: Reuters

Vanderbilt diabetes researchers make cell discovery

Diabetes researchers at Vanderbilt University have discovered key cells in the pancreas that secrete insulin actually have the capacity to regenerate.

Researchers surprisingly observed a “burst of proliferation of pre-existing beta cells” aided by a key bone-marrow component “recruited to the site of beta cell injury,” according to an article posted online in the scientific journal Cell Metabolism.

The study has important ramifications, Vanderbilt said in a press release, because scientists may some day be able to stem the rising incidence of diabetes by understanding how this regeneration occurs. Dr. Alvin Powers, the director of the Vanderbilt Diabetes Center, said the discovery is important for both people with type 1 diabetes and type 2 diabetes.

With type 1 diabetes, which was once referred to as juvenile diabetes, beta cells are destroyed and the body stops producing enough insulin. In type 2 diabetes, which typically occurs as people get older and gain weight, tissues become resistant to insulin and beta cell functions become abnormal.

The Vanderbilt research was supported with grants from the National Institutes of Health.

Source: The Tennessean

Forthcoming Event:

World Health Day Celebration

7th April 2014

Venue: IPA Auditorium, 22 B Panchanontola Road, Kolkata-700029

Time: 6.00 pm