

Indigenous drug to control heart attacks soon

Feb 15, 1999

Hyderabad: Streptokinase, a critical life-saving clot dissolving drug, used universally in the early management of heart attacks, has been for the first time developed indigenously in the country and is expected to hit the market by the year end at one-third cost of the imported one. City-based drug firm, Bharat Biotech International Limited (BBIL), Defence Institute of Physiology and Allied Sciences (DIPAS), Delhi, University of Wisconsin, USA and Care Foundation, another Hyderabad based cardiac research and education institute, are the main collaborating agencies in developing this by using recombinant DNA technology.

The preliminary animal trials have already begun here and these would be followed by extensive trials at the state-of-the-art animal testing laboratory at DIPAS, a DRDO laboratory. Extensive human trials would be taken up under the aegis of Care foundation.

Chairman and managing director of BBIL, Dr Krishna Ella told UNI here that the Indian drug would be priced at Rs 1000 initially as against the cost of Rs 3000 for imported ones.

The patent for the indigenous drug would be filed shortly. Streptokinase protein, a recombinant plasminogen activator, is cost effective and one of the five plasminogen activators used in thrombolytic (clot dissolving) therapy. This plays a critical role in the early management, of myocardial infraction (heart attack) which occurs due to blockade of the artery as a result of clot formation.

Dr Ella, who is an NRI, said the price would be further brought down. Hoechst, Glaxo, German Remedies and a Cuban company were the leading international suppliers of Streptokinase in the country. Stating that Streptokinase was like a first aid, he said it could be administered even by a physician by following a proper protocol. His company, alongwith Care foundation, was planning to organise continuing medical education programmes for physicians in rural areas so that the life-saving drug could be administered in case of emergencies.

Dr Krishna Reddy, a senior cardiologist of the Care foundation, said chest pain persisting for more than 30 minutes is being diagnosed as myocardial infraction having a 15 per cent mortality rate. Administration of a thrombolytic or clot dissolving agent within six hours of the onset of chest pain would reduce the risk of death by 40 per cent.

He said most of the leading hospitals in the country routinely prescribe Streptokinase in the management of heart attack. But abroad it is being administered even at home. "Time is the muscle here. The earlier you give, the more heart muscle is saved from getting damaged", he pointed out adding that the heart muscle suffers extensive damage within six hours of an attack.

Indians highly susceptible

Dr Ella and Dr Krishna Reddy pointed out that genetic predisposition coupled with changing lifestyles have made Indians highly susceptible to heart attacks. An Indian abroad had three times greater risk of getting a stroke than a person of white origin.

According to "World Bank health sectoral priorities review", studies of overseas Indians involving different generations of migrants from India/South Asia suggest that people of Indian origin have a special susceptibility to coronary artery disease (CAD). This was because they face the challenges of epidemiologic transition.

Cautioning that the current rate of heart attack deaths was around 190 deaths/100,000, they said this was to go up to 250 per one lakh by 2002. An epidemic of CAD had already set in urban areas in the country with nearly 10 per cent of those above 40 suffering from it. According to statistics available with Care foundation, of the total 72 million people suffering from CAD worldwide, as many as 22 million were in India. The annual mortality rate due to heart attacks was 2.2 million in India as against six million all over the world.

DIPAS director Dr W Selvamurthy said as part of the societal missions initiated by Dr A P J Abdul Kalam, DIPAS was actively involved in developing the indigenous Streptokinase.

According to Arun Tiwari, director of Cardio-vascular technology institute (CVTI), an affiliate of Care foundation, use of plasminogen activators in India was limited by several factors, including the price, lack of availability in rural areas and special storage conditions and also apprehensions of side-effects associated with the drug. However, there were no other alternative options for thrombolytic therapy in myocardial infraction, he added.

The Care foundation, headed by eminent cardiologist Dr B Somaraju, had a few years ago developed the country's first indigenous coronary stent, called Kalam-Raju stent.