CAPE ARGUS (AM Edition)
10 Sep 2012, p.10

HEALTH ALERT

LINK BETWEEN ARV AND HEART DISEASE

Side-effects can include increased body weight and bad cholesterol levels – study

Sipokazi Fokazi
HEALTH WRITER

ANTIRETROVIRAL drugs can boost the immune system and enhance life expectancy, but a local study has also revealed that prolonged use of some of these lifesaving drugs can also increase the risk of heart disease.

The study, which was carried out by researchers at Stellenbosch University, investigated the side-effects of Lopinavir/Ritonavir and found that there was a link between the antiretroviral therapy (ART) and mild metabolic dysfunction.

Lopinavir/Ritonavir, otherwise known as Aluvia, is a fixed-dose combination therapy used in the first line drug regimen of HIV/Aids treatment.

Professor Faadiel Essop, the lead researcher of the cardio-metabolic research group from the Department of Physiological Sciences, said early data of animal models had shown that the use of this therapy was associated with increased body weight and bad cholesterol levels – risk factors for heart disease. Added to this, expression of several genes that regulate fat metabolism were increased in the liver and heart tissues by Lopinavir/Ritonavir treatment.

"Our early animal data show that antiretroviral (ARV) treatment with this therapy can result in side-effects such a higher body weight and increased low density lipoprotein [bad cholesterol] levels, and also some effect on heart function," he said.

Essop said while the study had only been carried out on rats so far, further tests done at several ARV clinics in the Boland as a follow-up to the lab findings, were hoped to shed more light on the effect of this drug therapy on humans.

Essop said the use of antiretrovirals was well known for "enhancing the life expectancy and quality of life of HIV-infected individuals", but warned that long-term use of ART might further fuel the growing burden of cardio-metabolic diseases. He said the new data suggested future treatment of the disease would require a comprehensive strategy.

"In other words, ARV-treated patients will also have to be concurrently managed to monitor the onset of cardio-metabolic diseases such as diabetes and heart diseases," he said.

"It is crucial to understand the underlying mechanisms better that drive these processes, since the ART roll-out has markedly improved over the last decade, meaning that associated metabolic perturbations will increasingly manifest in such individuals," he said.

Kathleen Reyskens, who is taking part in the ongoing study as part of her PhD thesis in psychological science, said there was a need for researchers to find out mechanisms behind the side-effects.

"Ultimately, if we can find out how it works, we might be able to adapt the drug to eliminate the side-effects. In this way, clinicians will be able to benefit from our research," she said.

Reyskens was commended for her role in the study when she won a first place for her presentation of the study at the second UK-SA Cardiovascular Research workshop, which was held in Cape Town recently.

Organised by the European Society of Cardiology, UCT, and the SA Society for Cardiovascular Research, the workshop aimed to highlight the work of young researchers in SA and to promote cardiovascular research collaborations.

sipokazi.fokazi@inl.co.za