

Volume 20 Number 2

November 2012



HIV and diabetes in Africa  
Diabetes: a global epidemic with potential solutions  
Serum copper and zinc levels in type 2 diabetic patients  
Clinical patterns and complications of diabetic patients  
Microalbuminuria in type 2 diabetic patients

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ISSN 1468-6570

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## 26 In the news

### 28 Review Article

#### HIV and diabetes

M J A Reid, B M Tsimba, and  
B Kirk

### 33 Review Article

#### Diabetes mellitus: a global epidemic with potential solutions

R N Oputa and S Chinenye

### 36 Original Article

#### Serum copper and zinc levels in Nigerian type 2 diabetic patients

O O Olaniyan, M A M Awonuga,  
A F Ajetunmobi, I A Adeleke,  
O J Fagbolade, K O Olabiya,  
B A Oyakanmi, and  
H B Osadolor

### 38 Letter to the Editor

### 39 Original Article

#### Clinical patterns and complications of African diabetes patients: preliminary data from KUTH, Rwanda

G J Rudasingwa, E Amendezo,  
and M Twagirumukiza

### 43 Original Article

#### Prevalence and factors associated with microalbuminuria in type 2 diabetic patients in Tanzania

S Ghosh, I Lyaruu, and  
K Yeates

### 47 Case Report

#### Is Hb<sub>1c</sub> testing in Nigeria only for the rich?

O F Adesina, A O Oduniyi,  
A O Olutunde, M O Ogunlana,  
J O Ogunkoya, B A Alalade,  
S M Otubogun, and A C Adesina

### 48 Guidance for Authors

## Editorial

### HIV infection and diabetes

This edition of the *African Journal of Diabetes Medicine* includes an article by a collaborative group from Botswana and the USA, concerning the link between HIV infection and type 2 diabetes. The potential association is well known, but its importance is only recently being appreciated. This is largely because of the association between antiretroviral drugs (ARVs) and glucose intolerance. Most patients with HIV infection and AIDs live in Africa, and over the last decade a large number have become established on ARV treatment. This is a very positive achievement, but it does mean that the long-term side-effects of ARVs are now increasingly being seen.

Some ARVs are more prone to glucose intolerance than others – notably Nucleoside Reverse Transcriptase Inhibitors (NRTIs) and Protease Inhibitors (PIs). Potential mechanisms are complex, and include insulin resistance, reduced beta cell function, and redistribution of body fat (favouring central obesity).<sup>1</sup> It is hard to estimate the size of the increased diabetes risk, but there is no doubt it is substantial, and the full effect remains to be seen.

An additional problem is that ARVs may also increase diabetes complication risk. HIV is itself associated with proteinuria and an HIV-associated nephropathy. Diabetes can also cause specific proteinuric kidney disease, and it appears that the co-existence of diabetes and HIV infection at least doubles the risk of proteinuric nephropathy, compared with having either disease alone.<sup>2</sup>

The complex interaction between HIV infection and diabetes is still emerging, and much remains to be learnt. There is no doubt however, that the increasing use of ARVs will raise the prevalence and burden of type 2 diabetes in Africa.

Professor Geoff Gill  
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