

## **Age, sex and hyperlipidemia: Is it a simple association?**

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### **Introduction**

Hyperlipidemia is a known cardiovascular disease risk factor. There are effective lifestyle, dietary and pharmacological interventions to treat hyperlipidemia. It is important to target testing for hyperlipidemia for the most appropriate age sex groups to optimize resource utilization. Identifying such groups is not easy when there is an interaction between age and sex.

### **Objective**

To describe the association between age, sex and hyperlipidemia among 35 to 64 year old residents of Ragama.

### **Methods**

Residents aged 35-64 years in the Ragama MOH area were randomly sampled from the voters list after stratification into 10 year age groups. Blood for lipid profile was collected after a 14 hour overnight fast for analysis. Bivariate and multiple logistic regression were performed using Stata 8.2. Results are expressed as odds ratios and relevant 95% confidence intervals (OR; 95% CI).

### **Results**

Total sample analysed was 2987; 45% (n=1338) were males, 17% (n=515), 38% (n=1140) and 45% (n=1332) were in the age groups of 35-44, 45-54 and 55-64 years respectively. The prevalence of hyperlipidemia was 36%. In bivariate analysis, females (OR 1.3; 95% CI 1.1-1.5) and the age groups of 45-54 (OR 1.7; 95% CI 1.3-2.1) and 55-64 years (OR 1.5; 95% CI 1.2-1.9) when compared to 35-44 years were at a higher risk of hyperlipidaemia . In multiple logistic regression too females (OR 1.2; 95% CI 1.1-1.4) and the same age groups ( 45-55 [OR 1.7; 95% CI: 1.3-2.1] and 55 to 64 years OR 1.5; 95%CI: 1.2-1.9) respectively) had higher risk of hyperlipidaemia. When an age sex interaction term was added to the above model, 35-44 year old females had the lowest risk. In comparison to the latter, the OR (95%CI) of females of 45-54 and 55-64 years were 2.4(1.8-3.4) and 2.8(2.1-3.9) respectively. The same for males of 35-44, 45-54, and 55-64 years were 2.0(1.3-2.9), 2.3(1.6-3.2) and 1.5(1.1-2.1) respectively.

### **Conclusion**

The risk of hyperlipidemia increased with increasing age among females but among males the lowest risk was in the 55-64 year age group. Attempts to portray a simple picture are likely to obscure important details and may even be misleading.