CORRELATES OF DYSGLYCAEMIA AND IMPLICATIONS FOR DIABETES CARE IN CALABAR, NIGERIA.

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BACKGROUND:

Besides differences in the overall prevalence between IGT and IFG, there is now clear evidence of differences in phenotype between the two categories. The most consistent and statistically significant difference is that IFG is commoner in men than women in virtually all age groups, typically being 1.5–3 times higher, but up to seven or eight times higher in Europeans aged 50–70 years. Conversely, the prevalence of IGT is higher in women than men in all age groups except over the age of 60 in Asian populations.

OBJECTIVE:

To determine the relationship between age, sex and the development of dysglycaemia in Calabar.

METHODS:

The study was a cross sectional survey of a representative sample of Calabar metropolis comprising 645 males (56.9%) and 489 females (43.1%) aged between 15 and 79 years. A multistage sampling method was applied to select participants for the study. Anthropometric data was obtained and an oral glucose tolerance test (OGTT) was performed on all participants following which participants were categorized as normal glucose tolerance (NGT), IFG, IGT and diabetes mellitus (DM). Anthropometric indices were expressed as mean (standard deviation). The categorisation was done using American Diabetes Association (ADA) classification (2003) and the result in percentages.

RESULTS:

The proportion of males and females with IFG (56.7% males, 50.6% females), IGT (46.3% males, 44.2% females) and Diabetes Mellitus (64.7% males, 60.9% females) was highest in the middle age group. The prevalence of various forms of dysglycaemia was significantly higher in males than females; IFG (9.3% vs 8.2%), IGT (21.1% vs 17.6%) and DM (7.9% vs 4.9%).

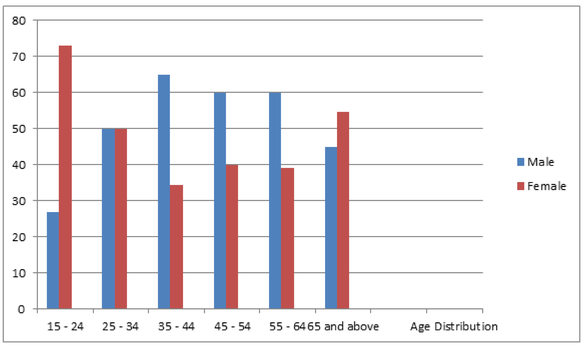

Figure 1: Distribution of participants by age and sex

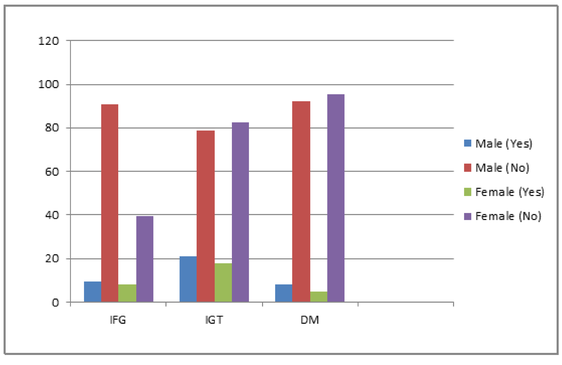

Figure 2: Relationship between Sex and Dysglycaemia

Table 1: Relationship between age and forms of dysglycaemia

		Presence of IFG		Row Total	X^2	P value
Male	Age Category (Years)	Yes (%)	No (%)			
	15-39	23 (38.3)	310 (53.0)	333	4.8	0.09
	40-59	34 (56.7)	248 (42.4)	282		
	60-79	3 (5.0)	27 (4.6)	30		
	Column Total	60	585	645		

		Presence of IFG		Row Total	X^2	P value
Female	Age Category (Years)	Yes (%)	No (%)			
	15-39	16 (40.0)	269 (59.9)	285	6.13	0.05
	40-59	20 (50.0)	145 (32.3)	169		
	60-79	4 (10.0)	35 (7.8)	39		
	Column Total	40	449	489		

		Presence of IGT		Row Total	X^2	P value
Male	Age Category (Years)	Yes (%)	No (%)			
	15-39	70 (51.5)	263 (51.7)	333	2.48	0.3
	40-59	63 (46.3)	219 (43.0)	282		
	60-79	3 (2.2)	27 (5.3)	30		
	Column Total	136	509	645		

		Presence of IGT		Row Total	X^2	P value
Female	Age Category (Years)	Yes (%)	No (%)			
	15-39	27 (31.4)	258 (64.0)	285	51.7	0.0009
	40-59	38 (44.2)	127 (31.5)	165		
	60-79	21 (24.4)	18 (4.5)	39		
	Column Total	86	403	489		

		Presence DM		Row Total	X^2	P value
Male	Age Category (Years)	Yes (%)	No (%)			
	15-39	15 (29.4)	318 (53.5)	333	11.0	<0.01
	40-59	33 (64.7)	249 (41.9)	282		
	60-79	3 (5.9)	27 (4.5)	30		
	Column Total	51	594	645		

		Presence of IGT		Row Total	X^2	P value
Female	Age Category (Years)	Yes (%)	No (%)			
	15-39	6 (26.1)	279 (59.9)	285	10.3	<0.01
	40-59	14 (60.9)	151 (32.4)	165		
	60-79	3 (13.0)	36 (7.7)	39		
	Column Total	23	466	489		

Young age = 15-39 years; Middle age = 40-59years; Elderly age = 60 and above

Table 2: Multiple logistic regression of dysglycaemia on possible risk factors.

Variable	Odds Ratio	95% CI	
Constant		Lower	Upper
Age (Year)	1.03*	1.01	1.04
Obesity	1.35	0.99	1.84
Physical Activity	0.60*	0.42	0.86
Smoking	1.50*	1.02	2.19
Family history of DM	1.25*	0.90	1.74
Hypertension	2.09*	1.54	2.83

**Significant*

CONCLUSION:

Age and sex differences are important risk factors for dysglycaemia and the tendency for prevalence of IGT to increase in all age groups may have implications for diabetes care