

Lipid and glucose profiles in obese Algerian children and adolescents :

S.Kerkouche , A.Ladjouze, N.Haddad, Z.Bouzerar, Paediatric Department
CHU Bab El Oued, Algiers, Algeria

Introduction:

•Obesity constitutes a risk factor for several early-onset metabolic disorders. The problem is escalating in Africa, where the number of obese or overweight children and adolescents has increased by almost 50% since 2000 according to World Health Organisation (WHO data).

Objectives:

To determine the lipid and glucose profiles in Algerian children and adolescents with obesity, defined as body mass index (BMI) >97th centile according to WHO growth data.

Patients and methods:

Retrospective study of obese subjects aged 5-19 years without known type 1 or 2 diabetes or previous systemic illness, followed in a single center over a 10-year period. Auxological data were collected and compared against WHO reference information. Total cholesterol, high and low density lipoprotein (HDL and LDL), triglyceridemia and fasting plasma glucose (FPG) were measured.

Results

During the period of January 2007-December 2018, 231 patients (102F:129M) presented with obesity of whom 50 (28F:22M) were enrolled in the study.

Table 1 :Auxological data at initial assessment

Clinical parameters	Mean±SD
Age	10.20 ±3.5 years
Height (SDS)	0.48±1.16 cm
BMI(SDS)	3.51±1.34

Table 2 :Biological data at initial assessment

Parameters	Median	Range
Total cholesterol(mg/dl)	157	25-202
HDL cholesterol (mg/dl)	42	15-89
Triglycerides (mg/dl)	100,5	35-187
fasting plasma glucose(mg/dl)	88,5	69-114

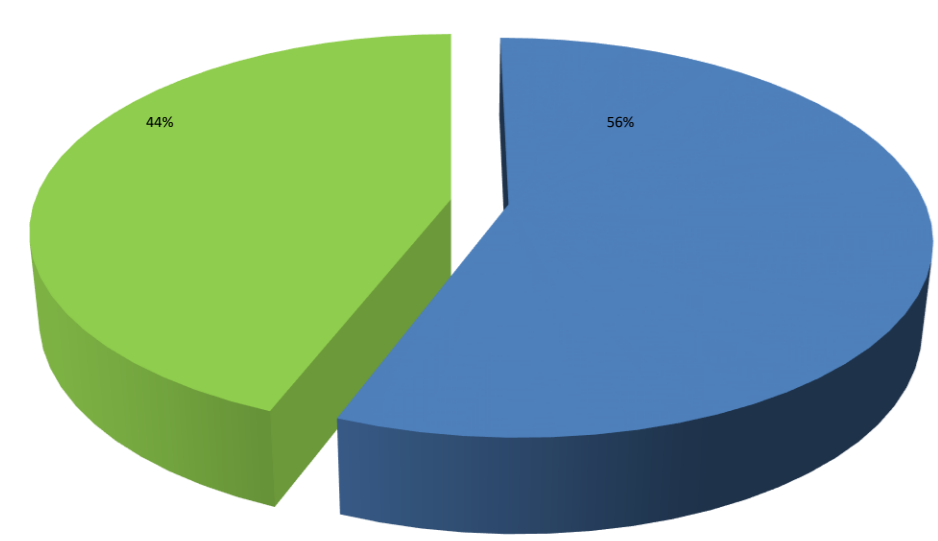
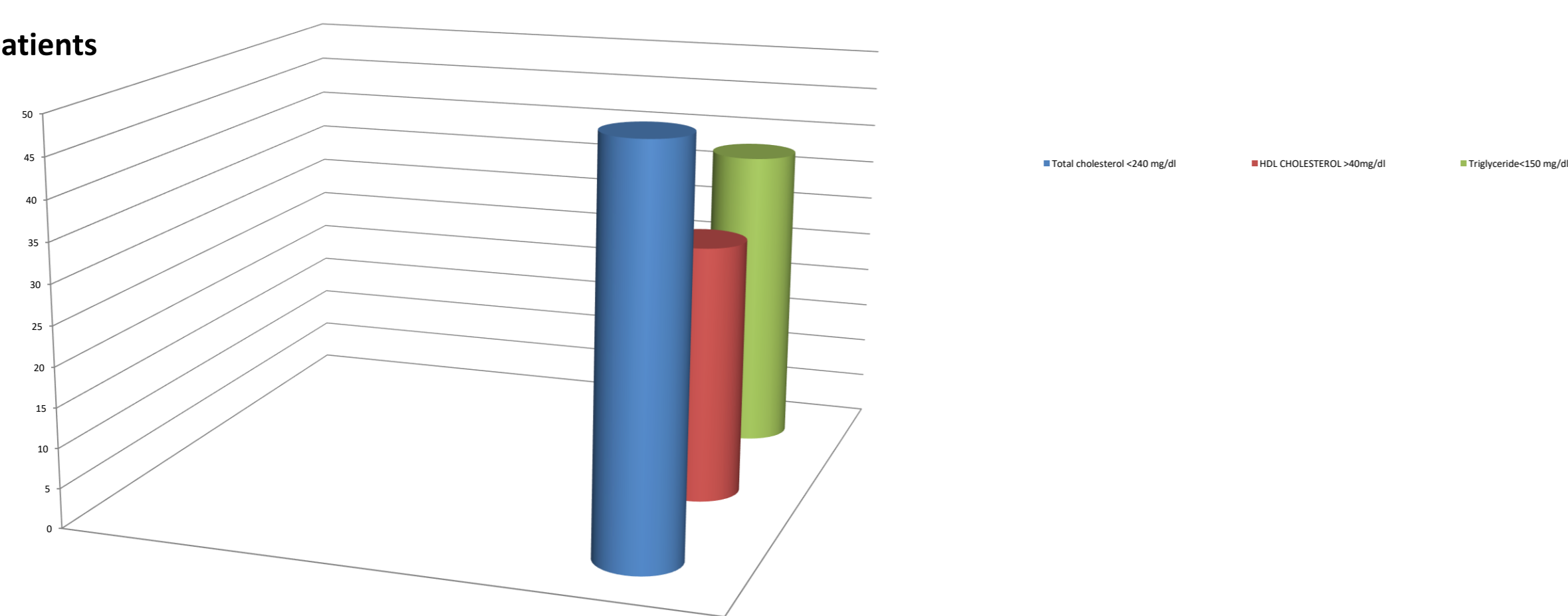


Figure 1 : Males and females distribution

Number of patients



Age of patients

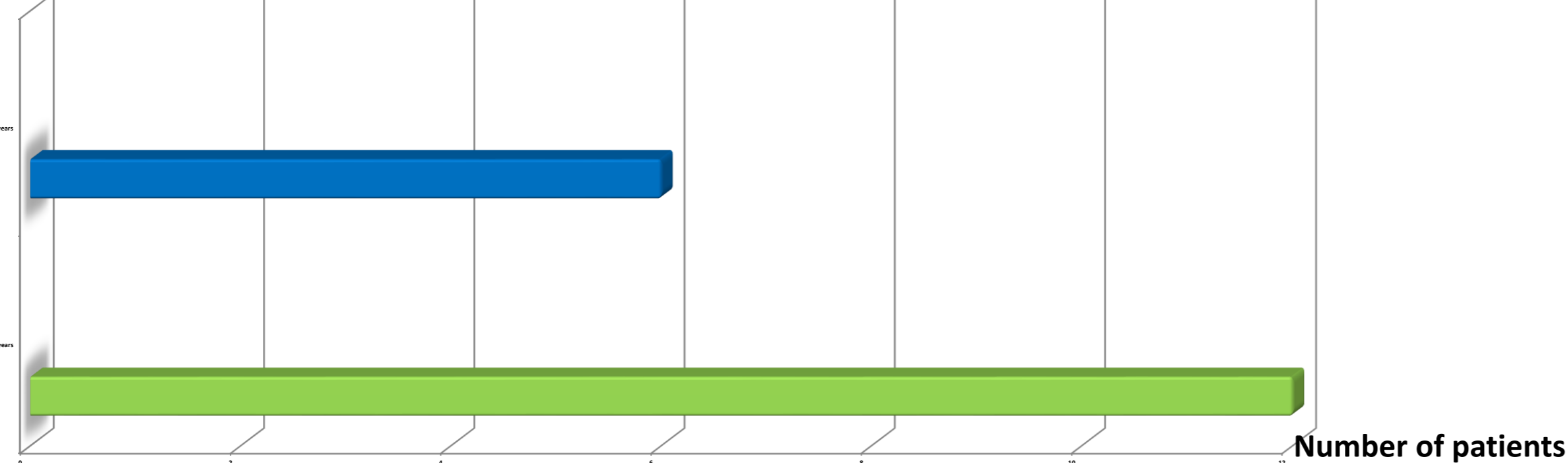
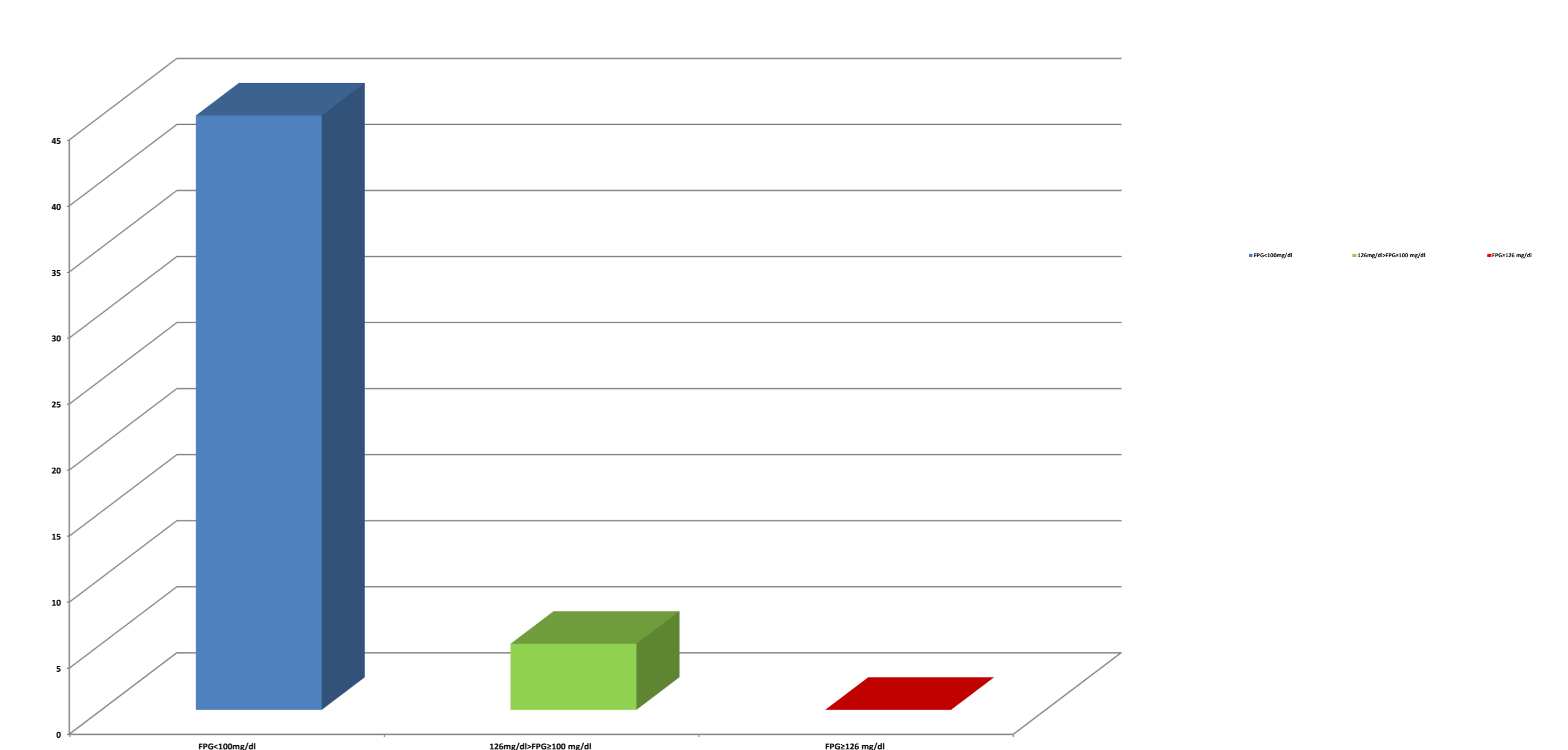


Figure 3:Prevalence of hypo-HDL-Cholesterolemia(<40mg/dl)



Discussion

Hypo-HDL-cholesterolemia followed by hypertriglyceridemia are the most prevalent metabolic abnormalities in our study population, affecting up to a third of patients. While overt diabetes mellitus was not found, 10% of patients had impaired fasting glucose. To reduce the morbidity and mortality inherent to cardio-metabolic risk, it is essential to establish national strategies to prevent and control obesity in Algerian children.