

ABSENCE OF DYSLIPIDEMIA IN OBESE CHILDREN WITH BMI ≥ 2.5 SDS AND SIMILAR LIPIDEMIC PROFILE TO THOSE WITH BMI < 2.5 SDS OR NORMAL WEIGHT

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INTRODUCTION

- Pediatric obesity remains an ongoing serious international health concern threatening adult health and longevity.
- Screening for comorbidities of obesity should be applied in a hierarchical, logical manner for early identification before more serious complications result.

AIM

Compare between obese and normal weight children.

- triglycerides,
- total cholesterol,
- HDL and LDL levels

RESULTS

- Mean age was 9.5yrs (SD, 3.07),
 - BMI: 2.28(SD, 0.59),
 - Total cholesterol: 166.9 (SD, 32.7), Triglycerides: 81.5 (SD, 46.2),
 - HDL: 52.3 (SD, 13.0),
 - LDL: 99.5 (SD, 27.3).
- There was neither statistically significant difference in the sex distribution nor statistically significant difference in the lipidemic profile among the four groups.
- Obese children were more often prepubertal as opposed to normal weight children ($p < 0.05$).
Clinical and laboratory characteristics are summarized in table 1.

Table 1. Clinical and laboratory characteristics.

*One-Way Analysis of variance (ANOVA), $p < 0.05$. **x2 test, $p < 0.05$.

	Group 1 (n=157)	Group 2 (n=130)	Group 3 (n=124)	Group 4 (n=136)	p
Age (yrs)	10.9 (2.4)	9.7 (2.2)	9.5 (2.8)	7.6 (3.6)	*
Sex (males/females)	67/90	63/67	60/64	71/65	NS
Tanner 1/>2	43%/57%	65%/35%	64%/36%	76%/24%	**
BMI z-score	1.7 (0.27)	2.1 (0.06)	2.4 (0.08)	2.9 (0.65)	*
Total cholesterol (mg/dl)	164.5 (34.1)	171 (35)	160.7 (28.9)	169.5 (31.7)	NS
<200	86%	79%	89%	86%	
≥ 200	14%	21%	11%	14%	
Triglycerides (mg/dl)	75.9 (39.4)	85.8 (44.3)	81.7 (59.1)	83.6 (41.3)	NS
<100	82%	73%	76%	76%	
≥ 100	18%	27%	24%	24%	
HDL (mg/dl)	53.6 (13.4)	52.5 (12)	52.3 (12.8)	50.4 (13.6)	NS
>40	91%	89%	81%	87%	
<40	9%	11%	19%	13%	
LDL (mg/dl)	100 (26)	101.8 (30)	93.2 (24.5)	102.5 (27.9)	NS
<130	88%	82%	94%	82%	
>130	12%	18%	6%	18%	

METHOD

- 547 children (286 females) with BMI (≥ 0 SD) were divided in four groups and analyzed retrospectively from the medical records.
- Group 1: $0SD < BMI < 2SD$,
- Group 2: $2SD \leq BMI < 2.25SD$,
- Group 3: $2.25SD \leq BMI < 2.5SD$,
- Group 4: $BMI \geq 2.5SD$)
- Age, sex, BMI z-score, triglycerides, total cholesterol, HDL and LDL (mg/dl) levels were recorded.
- One-Way Analysis of variance (ANOVA) and x2 test ($p < 0.05$) were calculated among groups using the SPSS statistics programme.

CONCLUSIONS

Obese children with BMI ≥ 2.5 SDS do not present dyslipidemia and have similar lipidemic profile to those with BMI < 2.5 SDS or normal weight children.

REFERENCES

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ACKNOWLEDGEMENTS

We are grateful of all the participants as well as the nursing team for their contribution in the set up of the study and the management of the data base

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