TRIPONDERAL MASS INDEX FOR THE CATEGORIZATION OF CHILDHOOD OBESITY ON THE BASIS OF 58.364 OBSERVATIONS OF 7.792 PATIENTS

R. Corripio, L.E. Alder-Ortiz, J. Pérez-Sánchez, D. Sánchez-Garvín
Parc Taulí Hospital Universitari, Institut d’Investigació i Innovació Parc Taulí I3PT, Universitat Autònoma de Barcelona

INTRODUCTION

Childhood obesity constitutes a relevant problem of public health. Body mass index (BMI) is the most used anthropometric parameter for its definition.

Triponderal mass index (TMI) could identify metabolic risk by obesity with the advantage to be a constant value simplifying the calculations.

AIM

Determine the usefulness of triponderal mass index as a identifier of childhood obesity (0-18 years).

METHOD

- Sample: 58.354 clinical observations from 7,792 boys and girls, 0-18 years old, of the Pediatric-Endocrine Department of a Tertiary Hospital
- Data: sex, age, weight, size, BMI, TMI, Sensitivity, specificity, VPP and VPN for the values of TMI according to the values BMI-SD z score (<2, 2-3, 3-4, 4-5, >5 SD) for sex.
- ROC curve to determine the optimum cut-off point that maximizes the sensitivity and specificity of TMI in relation to the BMI z-score value.
- Two groups of age (<8 years and 8-18 years old)

RESULTS

58.354 clinical observations

45.57% <8 years old
54.44% 8-18 years old

42.62% Boys 57.40% Girls
51.38% Boys 48.61% Girls

No linear relation (< r 0.4)
Positive linear relation between BMI z score and TMI values (r >0.95)

CONCLUSIONS

- TMI presents a strong linear correlation with BMI-SD values in children 8-18 years old.
- TMI allows to describe the obesity degree easier.
- In children <8 years the relation between both variables does not seem to be so useful.

REFERENCES


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CONTACT INFORMATION

rcorripio@tauli.cat