

Urinary calcium in Moroccan schoolchildren and adolescents

Background: Depending on the World health organization reports, calcium deficiency is one of the most important deficiencies of all micronutrients that present a major health problem, which is responsible of many functional diseases especially osteoporosis and fracture risk at the later life. In the Moroccan population, studies about calcium are limited. Urinary calcium dosage is one of the most used methods for studying calcium deficiency and determining the body balance of this mineral. Thus, our aim's of study is study the urinary calcium in a sample of Moroccan children and adolescents.

Methods: A total of 131 children and adolescents aged between 6 and 18 years were involved in this descriptive cross-sectional study and were required from public schools at Rabat and its regions. Socio-economic and morbidity status were assessed for each participant and anthropometric parameters were measured. Urinary calcium was assessed through 24 hour urine by ICP-mass spectrometry.

Results: The total mean of urinary calcium was 72,48 mg/day. About 73% of children and adolescents present a urinary calcium deficiency confirmed by the Ca/Cr ratio which provides a good indicator of urinary calcium deficiency and that the reference value for urine Ca/Cr is 0.2. There were no significant differences related to sex towards calcium excretion and its correlation with nutritional status was shown negative.

Conclusion: Our findings show the existence of a several risk of calcium complications because due to the very less value of calcium excretion in comparison with recommendations. To deal with this situation, it is necessary to carry out an adequate strategy to prevent any calcium deficiency.

Country

Morocco

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Session Classification: Poster Session 4

Track Classification: Epidemiology