Effect of calcium and vitamin D on growth, rickets and Kashin Beck disease in a 0-5 year old cohort living in rural area of Central Tibet.


Nutrition and Metabolism Unit, University Children’s Hospital Queen Fabiola, Université Libre de Bruxelles, Brussels, Belgium
** Kashin Beck Disease Fondation, Tibet Autonomous Region
*** Kashin-Beck Disease Funds, Belgium
*** IRIBHM & Department of Biostatistics and Medical Informatics, Faculty of Medicine, Université Libre de Bruxelles, Brussels, Belgium

Preliminary data:
• Lhasa prefecture: endemic area for Kashin-Beck Disease (KBD)
• High prevalence of clinical rickets (up to 65%)
• Very low intake of calcium and vitamin D (less than 50% of the Dietary Reference Intake)

Results on growth, rickets and KBD:
• No impact of the supplement
• Strong effect of the time
• Improving of height for age, prevalence of KBD
• Worsening of the weight for age and height, skin folds, brachial circumference and rickets

Methodology:
• Prospective study from January 2010 to January 2013
• 4 groups in 4 different places, not randomized
• Ca: oral carbonate calcium, 1500 mg daily
• Vitamin D: oral solution, 25000 UI monthly
• Yearly follow up of clinical and anthropometric data

Results on dental health:
• No difference between the 4 groups on January 2010
• After three years, children with more than two carries, represent 4% of the group Ca - Vit D, 48% of the group control, 28% of the group Ca and 20% of the group Vit D

Conclusions and perspectives:
• Global supplement of calcium and vitamin D for the target population thanks to dental impact
• Increase total energy intake to improve growth and rickets
• KBD fund programs have to continue: global positive impact

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