INTRODUCTION:
• 1,000 million people worldwide present vitamin D deficiency. In children, the prevalence of vitamin D deficiency is referred up to 80% in certain countries, especially at high latitudes (above 37°).
• Vitamin D role in the immune system and in DM1 clinical variability has been described.

OBJECTIVE:
- To study deficit of VITD in children with DM 1 living in Alava (Location: 42° 51’north latitude 2° 41’west longitude) and check its influence in the metabolic control.

MATERIAL & METHODS:
• Prospective open intervention.
• Inclusion: Patients with DM type 1a with at least 12 m. of evolution.
  - First step of study (Abril-May 2014): intervention 6 months (sun exposure 3 m + treatment 3 m):
    ➢ Intervention 3 m at summer: activities “outdoors”
    ➢ Then treatment 3 months with 25,000 UI of colecalciferol (vitamin D), equivalent to 0.625mg (DELTIUS®)/1 every 3 weeks.
• 25-OH-Vitamin D levels: insufficiency <30ng/ml.
• Statistic test study for parity (n<30) (Student t), with a confidence interval of 95%. SPSS 19.0

RESULTS:
• 57 cases:
  • At debut:
    ➢ Average age: 8.24 years (DS 4.27 [0.3-15])
    ➢ HbA1c debut 11.11% (DS 2.37 [8-15.5])
  • During this study:
    ➢ Average age: 11.5 años (DS 3.67 [2-17])
    ➢ HbA1c media 7.95% SDS1.16 [5.8-9.6]
    ➢ No differences between sex
    ➢ 93% with bolus-basal (4/57 ISCI).
• VITAMIN D:
  ➢ 98% had deficit of vitamin D.
  ➢ 25-OH vitamin D levels: media 18 ngr/ml (DS[10-28]).
  ➢ Normal: 1 case; 12 years old European female (37 ngr/ml).

CONCLUSIONS:
• Children with DM1 in our region have an important deficiency of VitD.
• The outdoor activities in summer and the treatment with depot preparations is effective in correcting this deficit. Although no significant improve in metabolic control has been observed.