VITAMIN D (VD) SUPPLEMENTATION REDUCES THE RISK OF NEW EPISODES OF ACUTE OTITIS MEDIA (AOM) IN OTITIS-PRONE CHILDREN

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Background and aim: VD could modulate bacterial and viral infections. The aim of this study was to evaluate whether VD hypovitaminosis could be associated with an increased risk of recurrent AOM (rAOM) and VD supplementation could be effective in limiting the number of new AOM episodes in otitis-prone children.

Methods: A total of 116 children with a history of rAOM (defined as ≥3 or ≥4 episodes in the preceding 6 or 12 months, respectively) were randomized to receive VD 1,000 IU/day by mouth for 4 months or placebo. Episodes of AOM were monitored for six months and two blood samples (one at enrollment and one at the end of VD supplementation) were obtained in order to determine serum VD concentration.

Results: A total of 58 children were treated with VD and 58 received placebo. The number of children who experienced at least one AOM was significantly lower in VD group than among placebo (26/58 vs 38/58; p=0.03). The mean number of AOM episodes globally diagnosed in VD group was significantly lower than in placebo (0.7 ± 0.8 vs 1.4 ± 1.4; p=0.003). A significant reduction of AOM episodes was found when serum VD level was higher than 30 ng/mL.

Conclusion: VD hypovitaminosis is associated with an increase in the incidence of AOM, particularly when VD serum levels remain < 30 ng/mL. Administration of VD at the dose of 1,000 IU/day is associated with a significant reduction of the risk of AOM, suggesting this kind of prophylaxis in children with rAOM.