Oral intermittent vitamin D substitution: influence of pharmaceutical form and dosage frequency on medication adherence: a randomized clinical trial

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To assess adherence to and preference for vitamin D substitution with different pharmaceutical forms and frequencies of administration.; A focus group of stakeholders aimed at preparing the design of an interventional, randomized, cross-over study with 2 Œ 2 groups obtaining monthly or weekly vitamin D products in liquid or solid form for 3 months each. Dosage corresponds to cumulated amount of recommended 800 IU daily (5.600 IU weekly / 24.000 IU monthly). Main inclusion criteria were a vitamin D serum value < 50 nmol/l and age $\geq$ 18 years. Primary endpoint was adherence, secondary endpoints were preferences and vitamin D serum levels.; The focus group reached consensus for preference of a monthly administration of solid forms to adults. Full datasets were obtained from 97 participants. Adherence was significantly higher with monthly (79.5-100.0%) than weekly (66.4-98.1%) administration. Vitamin D levels increased significantly (p 75 nmol/l was achieved by 32% after 3 months and by 50% after 6 months. Preferred formulation was solid form (tablets, capsules) for 71% of participants, and preferred dosage frequency was monthly for 39% of participants.; Monthly oral vitamin D in solid form lead to the highest adherence, and is preferred by the participants. However, only one third of study participants achieved values in the optimal range of > 75 nmol/l cholecalciferol using weekly or monthly administration providing an average daily cholecalciferol dose of 800 IU.

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