**Compliance of the hemodialysis patient to the native vitamin D therapy**

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**Background**

Drug compliance of the dialysis patient is often considered as poor, notably because these patients are old, severely ill and treated by many different therapies. However, identification of the lack of compliance in patients is not so easy. Nowadays, it is recommended to give native vitamin D to dialysis patients. As this therapy may be closely monitored by 25-OH vitamin D plasma measurement, it could be a simple model to assess patients’ compliance.

**Methods**

In December 2010, we decided to give our patients cholecalciferol during a dialysis session in place of taking it at home. Majority of these patients got 25,000 IU of cholecalciferol once a week. We analyzed patients who received stable doses of vitamin D, 5 months before and after the modification in prescription (n=38). The 25-OH vitamin D plasma levels were measured three times before and after the modification in administering (within a six weeks interval). The Diasorin Liaison method was used. We separately analyzed the group of patients whose 25-OH vitamin D levels remained under 30 ng/mL.

**Results**

In the global population, mean concentration of 25-OH vitamin D levels increased from 26±12, 25±12, 30±12 ng/mL when therapy was taken at home to 36±12, 36±10, 39±10 ng/mL when it was given during one dialysis session per week. If we analyzed the 17 patients (45%) with 25-OH vitamin D levels under 30 ng/mL (19±7 ng/mL) before changing the administering procedure, we observed a continuous and very significant increase in 25-OH vitamin D levels in the three next measurement results (27±6, 29±6 and 32±8 ng/mL). There is a strong relationship between initial 25-OH vitamin D levels and the increase observed after changing the administration mode (r=-0.6). The change of prescription was realized in December (no cutaneous synthesis in Belgium) and the improvement in 25-OH vitamin D was thus clearly not linked to seasonal variation.

**Discussion**

We have illustrated the lack of compliance observed in a high percentage of dialysis patients. This lack of compliance may be particularly high for native vitamin D therapy because such therapy is not daily given. Therefore, such therapy should be given during dialysis session to improve compliance.