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Diarrhea induced by high doses of nicotinamide in dialysis patients

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To the Editor: Takahashi *et al.*[1] have recently described the effect of nicotinamide for controlling hyperphosphatemia in dialysis patients. However, Rottembourg *et al.*[2] reported thrombocytopenia in the same setting. We have started a prospective, open-label trial to study the efficiency and safety of nicotinamide in our hemodialysis patients with resistant hyperphosphatemia. Unlike Takahashi, we did not stop other phosphate binders. Six patients have already been included. Two patients were intolerant to sevelamer and thus only treated with calcium carbonate. The other four patients received a combined therapy. Five patients developed diarrhea during the study. In two of them, it was so important that nicotinamide had to be stopped. After discontinuing nicotinamide, diarrhea disappeared. In the three other patients, diarrhea improved with decreasing the dose of nicotinamide. The diarrhea started at a mean dose of 1050 ± 447 mg. We observed a significant decrease in phosphatemia while on treatment (from 85 ± 8.7 to 54 ± 12.1mg/l; $P = 0.0048$ for the repeated measure analysis of variance), but no effect on platelet count (from 260.167 ± 40.435 to 281.167 ± 51.503; $P = 0.33$).

Diarrhea induced by high doses of nicotinamide is not described in non-renal failure population.[3] However, in Takahashi's study, 7.8% of the patients developed such an adverse effect.[1] In our population, diarrhea induced by nicotinamide might also be related to the simultaneous use of calcium carbonate and/or sevelamer. If nicotinamide proves to be useful in the management of hyperphosphatemia, more studies are needed to evaluate its safety at high doses.

We have no conflict of interest to declare.

References

1. Takahashi Y, Tanaka A, Nakamura T *et al.* Nicotinamide suppresses hyperphosphatemia in hemodialysis patients. *Kidney Int* 2004; 65: 1099-1104.

2. Rottembourg JB, Launay-Vacher V, Massard J. Thrombocytopenia induced by nicotinamide in hemodialysis patients. *Kidney Int* 2005; 68: 2911-2912.

3. Gale EA, Bingley PJ, Emmett CL *et al.* European nicotinamide diabetes intervention trial (ENDIT): a randomised controlled trial of intervention before the onset of type 1 diabetes. *Lancet* 2004; 363: 925-931.