

Pharmacotherapeutic Report Calcium Acetate/Magnesium Carbonate (OsvaRen®) for Patients with Chronic Renal Failure Who are Treated by Dialysis

Summary

Positive Effects. In a direct comparison with 50 patients, the medication calcium acetate/magnesium carbonate was found to be more effective than calcium carbonate in reducing the serum phosphate levels. Moreover, administration of calcium acetate/magnesium carbonate did not increase the calcium levels. In contrast, no data has shown that hypercalcemia occurs less frequently than when calcium carbonate is administered. Only very few study results with calcium acetate/magnesium carbonate are available, in clinical practice non-calcium containing phosphate binders are preferred when serum calcium levels are high.

Negative Effects.

Based on the data available, the side effect profile of calcium acetate/magnesium carbonate was comparable to other calcium containing phosphate binders. The side effects which occurred most frequently were hypercalcemia and irritations of the GI tract. Specific side effects for calcium acetate/magnesium carbonate are hypermagnesemia and diarrhea. Clinical data regarding the effect of calcium acetate/magnesium carbonate on cardiovascular calcifications and bone diseases are missing.

Experience. The experience with calcium acetate/magnesium carbonate is limited; the experience with the other agents (calcium acetate, calcium carbonate and calcium carbonate/calcium lactogluconate) is large.

Therapeutic Limitations. The applicability of calcium acetate/magnesium carbonate and calcium acetate, calcium carbonate and calcium carbonate/calcium lactogluconate is largely similar. Specific limitations for calcium acetate/magnesium carbonate are the risk for hypermagnesemia and the contraindications of 3rd degree AV-blockage and myasthenia gravis.

Userfriendliness. The userfriendliness of calcium acetate/magnesium carbonate is comparable to that of calcium acetate, calcium carbonate and calcium carbonate/calcium lactogluconate.

In Conclusion. Calcium acetate/magnesium carbonate has many similarities to other calcium containing phosphate binders in the treatment of hyperphosphatemia for chronic renal failure supported by dialysis for patients with a low level of serum calcium. Some data suggests that calcium acetate/magnesium carbonate is possibly more effective than calcium carbonate in the reduction of the phosphate levels without increasing the calcium levels. However, the research data are very limited and the effects on vascular calcifications or bone diseases in the long run are unknown. Therefore, the therapeutic value of calcium acetate/magnesium carbonate is deemed similar to calcium acetate, calcium carbonate and calcium carbonate/calcium gluconate in the treatment of hyperphosphatemia.

Recommendations by the CFH

Calcium containing phosphate binders are first choice for the treatment of hyperphosphatemia in patients with low levels of calcium in their serum that are under dialysis. Calcium acetate/magnesium carbonate is possibly more effective on the serum phosphate levels with less effect on the calcium level than the other calcium containing phosphate binders. However, the latter are preferred due to more experience with these phosphate binders. Patients with the following characteristics should only be treated with non-calcium containing phosphate binder: high serum levels of calcium, low PTH serum concentrations, or cardiovascular calcifications.

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