

Magnesium orotate



First report of diarrhoea, vomiting and abdominal pain: case report

A 21-year-old man developed diarrhoea, vomiting and abdominal pain during magnesium orotate treatment for congenital hypomagnesaemia.

The man, who had been receiving magnesium glycerophosphate and vitamin B₆ treatment since he was 2 months old, had his treatment changed to magnesium orotate (Mg²⁺ 18 g/day) in an attempt to increase his magnesium absorption and to decrease his magnesium dose. After 10 days of magnesium orotate treatment, he developed diarrhoea, vomiting and abdominal pain for which he received loperamide. His plasma magnesium remained stable at 0.57 mmol/L but his erythrocyte magnesium level decreased from 1.72 on day 8 of magnesium orotate treatment to 1.32 mmol/L. His alkaline phosphate level was 890 U/L (normal 70–220) and his transaminase levels were also elevated. On day 18 of treatment, vomiting, diarrhoea and abdominal pain stopped and loperamide was discontinued. However his alkaline phosphatase level continued to increase, reaching 905 U/L, and his ALT level reached 92 U/L. His erythrocyte and plasma magnesium levels also increased to 1.68 and 0.69 mmol/L, respectively.

Magnesium orotate was discontinued due to constant hyperphosphataemia and a moderate rise in ALT. Magnesium glycerophosphate and vitamin B₆ were reinstated. 10 days after magnesium orotate was discontinued the man's alkaline phosphatase and ALT levels were 705 and 11 U/L, respectively. Three weeks after the discontinuation of magnesium orotate his alkaline phosphatase was 200 U/L. At last follow-up he was receiving magnesium glycerophosphate treatment and requested magnesium infusion when he felt tired or sick.

Guillard O, et al. Unexpected toxicity induced by magnesium orotate treatment in congenital hypomagnesemia. *Journal of Internal Medicine* 251: 88-90, Jul 2002 - France 800913159

» **Editorial comment:** A search of AdisBase, Medline and the WHO Adverse Drug Reactions database did not reveal any previous case reports of vomiting, diarrhoea or abdominal pain associated with magnesium orotate.