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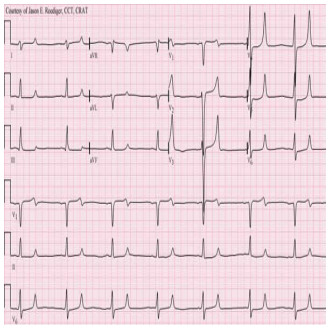
Zirconium Cyclosilicate Effective For Hyperkalaemia



In a new study published in *JAMA* and presented this week at the American Heart Association's Scientific Sessions 2014, researchers evaluated the efficacy and safety of the drug zirconium cyclosilicate in patients with hyperkalaemia. The project was carried out by Mikhail Kosiborod, MD, of Saint Luke's Mid America Heart Institute, Kansas City, and colleagues.

Hyperkalaemia, a common electrolyte disorder, can cause life-threatening cardiac arrhythmias and is also associated with chronic kidney disease, heart failure, and diabetes mellitus. Currently, there is a lack of effective and safe therapies for its management in the outpatient setting.

Sodium zirconium cyclosilicate (zirconium cyclosilicate) has been shown to entrap potassium in the intestine. Previous studies also showed that the drug is well-tolerated and effective in lowering potassium within 48 hours of administration.

In this Phase 3 trial, outcomes for sodium zirconium cyclosilicate were evaluated for 28 days. 258 ambulatory patients with hyperkalaemia who were recruited from 44 sites in the US, Australia and South Africa received the drug three times daily in the initial 48 hour period. 238 patients who achieved normal potassium levels were then randomised to receive zirconium cyclosilicate in doses of either 5 g (n = 45 patients), 10 g (n = 51), or 15 g (n = 56), or placebo (n = 85) daily for 28 days.

The study showed that zirconium cyclosilicate was effective both in rapidly lowering potassium to normal range and maintaining normal potassium levels for up to four weeks in patients with various degrees of hyperkalaemia. The effect was consistent across all patient subgroups. Normal levels of potassium were achieved in 84 percent of the patients within 24 hours and in 98 percent of patients within 48 hours of treatment initiation. As compared to placebo, all three doses of the drug resulted in a higher proportion of patients with normal potassium levels for up to 28 days. The tolerability profile of zirconium cyclosilicate was comparable with that of placebo.

"Further studies are needed to evaluate the efficacy and safety of zirconium cyclosilicate beyond 4 weeks and to assess long-term clinical outcomes," the authors write.

According to Bradley S. Dixon, MD, of the Veterans Administration Medical Center and the University of Iowa in Iowa City, "The findings reported by Kosiborod et al. suggest that zirconium cyclosilicate may represent a promising new therapy for the acute and short-term (i.e., 28-day) treatment of outpatients with mild hyperkalaemia." Dr. Dixon did caution that longer-term studies may be needed to assess the benefits and risks of the drug for extended use, especially among hospitalised patients and those with severe hyperkalaemia and other medical conditions that affect potassium levels.

Source: JAMA

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