

Kchek[®]

Calcium Polystyrene Sulphonate Powder 15 gm Sachets

Description:

Polystyrene sulfonates are polymers derived from polystyrene but containing sulfonate functional groups. They are widely used to remove ions such as potassium from solutions in technical or medical applications. Polystyrene sulphonate is usually supplied in the sodium and calcium form. It is used as a potassium binder in acute and chronic kidney disease for people with hyperkalaemia (abnormal high blood serum potassium levels).

Composition:

Each Sachet of **KCHEK[®]** contains 15g of Calcium Polystyrene Sulphonate.

Indication:

KCHEK[®] is indicated for the Treatment of Hyperkalemia in Kidney diseases patient.

Mechanism of Action:

Removes potassium by exchanging calcium ions for potassium ions in the intestine before the resin is passed from the body. Used to help remove excessive amounts of potassium from the blood and treatment of Hyperkalemia in Kidney diseases patient.

Dosage:

Adults:

Oral Route: The recommended starting dose of **KCHEK[®]** is 15 gm three or four times/day in water or as suspension in sweetened vehicle.

Rectal route: As a suspension of 30 gm resin in 150 ml water or 10% dextrose in water as daily retention Enema.

Children:

Oral route: Initial dose is 1gm/kg BW.

Rectal route: Dose is same as Oral but the dilution same as Adults.

Presentation:

KCHEK[®] is available as a sachet of 15g.

La Renon Healthcare Pvt. Ltd.

207-208 Iscon Elegance, Circle P, Prahlad Nagar Cross Roads,
S.G. Highway, Ahmedabad-380015, Gujarat, India.
Phone: + 91-79-3046-1000 (30 lines) | Fax: +91-79-3046-1001
E-mail: info@larenon.com | Web: www.larenon.com

I am: _____

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La Renon[®]



...With

Kchek[®]

Calcium Polystyrene Sulphonate Powder 15 gm Sachets



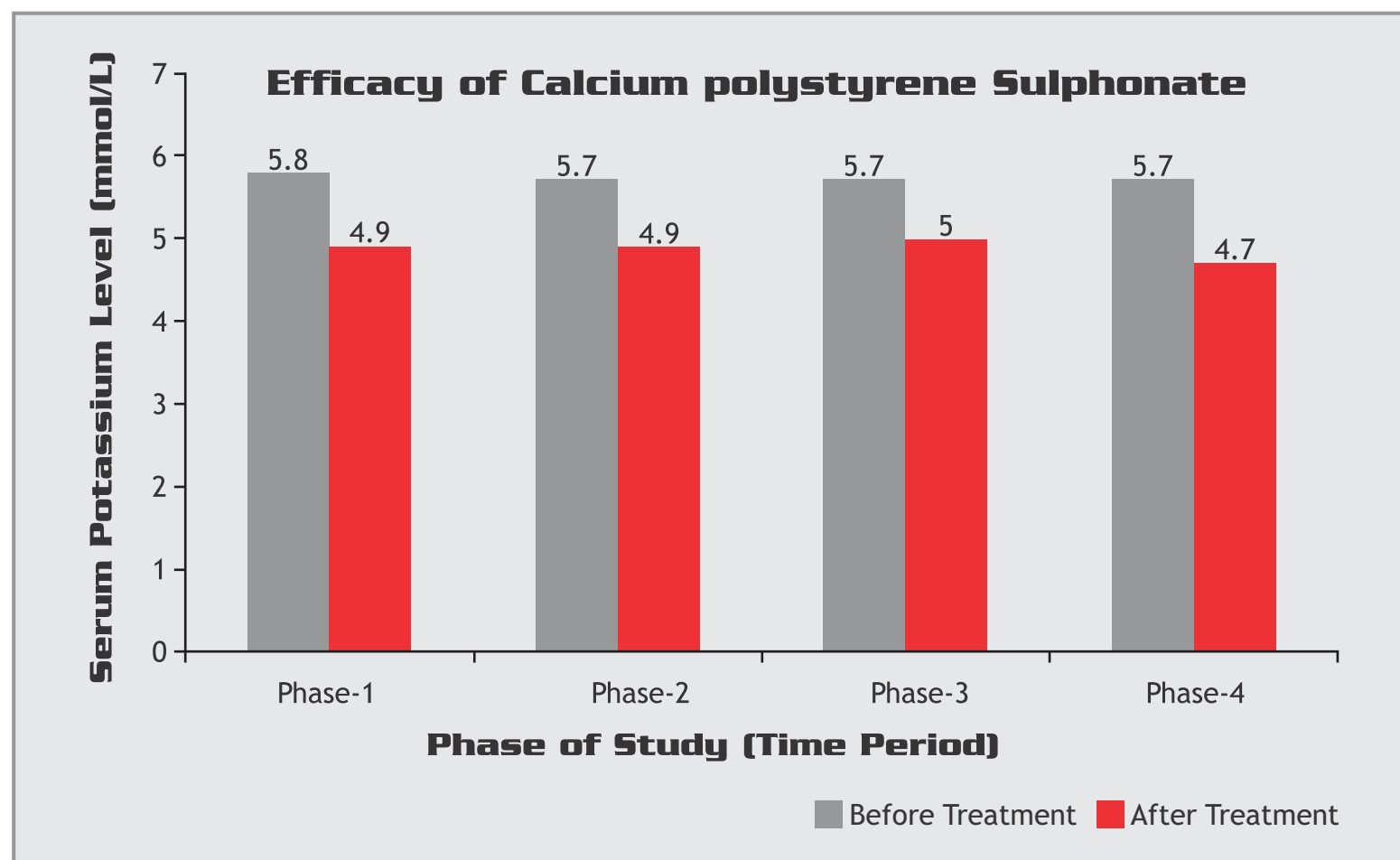
Bind With Perfection.....>

...With
Kchek[®]
Calcium Polystyrene Sulphonate Powder 15 gm Sachets

Background

- Hyperkalemia is one of the most dreadful complications of chronic kidney disease (CKD).
- Reasons are multiple, including decreased urinary excretion secondary to poor kidney function, dietary intake, potassium-sparing diuretics, ACE inhibitors, ACE receptor blockers, urinary tract obstruction, sickle cell disease, Addison disease and systemic lupus erythromatosis.
- Potassium is a major ion of the body. Nearly 98% of potassium is intracellular. The ratio of intra cellular to extra cellular potassium is important in determining the cellular membrane potential. Normal levels of potassium are important for the maintenance of heart, and nervous system function.
- Medical management includes use of cation exchange resins to reduce the amount of excessive potassium from the body¹.
- Calcium polystyrene sulphonate binds with potassium in the gut, forming a complex that cannot be absorbed into the blood. This effectively reduces the levels of potassium in the bloodstream. It is used in situations where the level of potassium in the blood is too high, for example, in people who are not producing urine, or in people with severe kidney failure who are having dialysis.

Long Term Efficacy of Calcium polystyrene in hyperkalemia²:



Clinical Effectiveness:

Long-Term Efficacy of Oral Calcium Polystyrene Sulfonate for Treating Hyperkalemia in CKD Patients

Introduction and Aims:

This study was undertaken to investigate the long-term efficacy of oral calcium polystyrene sulfonate for treating mild hyperkalemia on an outpatient basis.

Methods:

Patients were enrolled who visited outpatient department due to CKD from January 2010 to December 2014 and took oral CPS for 1 week or more because of their elevated serum potassium levels ≥ 5.0 mmol/L. They continued a fixed dosage of CPS during their medication; Medication periods of less than 3 months, 3 to 6 months, 6 months to 1 year, and 1 year or more were defined as Phase 1, 2, 3, and 4, respectively. Two different formulae, granules and jelly, were prescribed according to patient preference.

Results:

A total of 247 patients were enrolled, and 136 were male. The mean age was 64 years. The eGFR was 30 ± 15 mL/min/1.73 m², ranging from 5 to 85 mL/min/1.73 m². Underlying kidney diseases were diabetic nephropathy, hypertensive nephrosclerosis, chronic glomerulonephritis, and others. The basal serum potassium level was 5.8 ± 0.3 mmol/L were given to 172 and 75 patients, respectively.

In Phase 1, serum potassium was lowered from 5.8 ± 0.3 mmol/L to 4.9 ± 0.6 mmol/L. CPS was used at a daily dose of 8.0 ± 3.5 g/d for 7.5 ± 5.4 weeks.

In Phase 2, serum potassium was lowered from 5.7 ± 0.3 mmol/L to 4.9 ± 0.6 mmol/L. CPS was used at a daily dose of 7.5 ± 3.5 g/d for 4.9 ± 0.6 months.

In Phase 3 (n=68), serum potassium was lowered from 5.7 ± 0.3 mmol/L to 5.0 ± 0.5 mmol/L. CPS was used at a daily dose of 8.0 ± 3.5 g/d for 10.2 ± 1.8 months.

In Phase 4 (n=38), serum potassium was lowered from 5.7 ± 0.3 mmol/L to 4.7 ± 0.6 mmol/L. CPS was used at a daily dose of 7.5 ± 3.5 g/d for 23.1 ± 10.5 months.

Response rates were 87%, 91%, and 90% in Phase 2, Phase 3, and Phase 4, respectively. Over the whole follow-up periods, no serious adverse effects were reported. Constipation was noted in 19 patients (8%).

Conclusion:

A small dose of oral calcium polystyrene sulfonate is effective and safe for controlling mild hyperkalemia in patients with CKD over a long period of time.

References:

- J Ayub Med Coll Abbottabad 2014;26(4)
- Nephrology Dialysis Transplantation :i3-i5, 2016