

Severe hyponatraemia, hypokalaemia and associated seizure following the administration of sodium picosulfate/magnesium citrate (picolax) – a case report

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Introduction

- Bowel preparation is known to cause minor electrolyte disturbances.
- There are only five reported cases of severe electrolyte disturbances following bowel preparation that have caused seizures.
- We report the case of a patient with severe hyponatraemia and hypokalaemia, resulting in a seizure, following the administration of picolax.

Case Report

- A 60 year old female patient with no significant past medical history and taking no regular medications presented with confusion following administration of picolax for an elective colonoscopy.
- On arrival her GCS was 14/15 but moments later she had a tonic-clonic seizure, with no urinary incontinence or tongue biting lasting two minutes.
- Following this, her GCS was 9/15. Laboratory tests revealed a sodium level of 119 mmol/L and a potassium level of 3.1 mmol/L.
- Other investigations including CT head and lumbar puncture were normal.
- Following intravenous replacement of electrolytes, her electrolytes improved (Table 1) and GCS returned to 15/15.

Table 1	On Admission	Day 1	Day 2	Day 3	Day 4
Sodium (mmol/L)	119	117	137	133	132
Potassium (mmol/L)	3.1	3.7	3.4	3.4	3.9
Urea (mmol/L)	3.1	2	1.5	1.7	2.8
Creatinine (mmol/L)	48	45	57	49	46
Serum Osmolality (mmol/kg(L))	244				
Urine Osmolality (mOsm/kg)	508				
Random Cortisol (nmol/L)	1000				

Discussion

- The patient suffered a tonic-clonic seizure secondary to acute hyponatraemia following administration of picolax.
- Severe hyponatraemia, hypokalaemia and associated seizures following bowel preparation are rarely described in the literature.
- Four of the five cases in the literature describe patients who have pre-existing medical conditions and are taking regular medication which could have contributed to hyponatraemia.
- The raised cortisol level rules out Addisons Disease, although serum and urine osmolality could suggest SIADH, due to the hypovolaemia the patient suffered as a result of diarrhoea and vomiting, this was not considered as a diagnosis

Conclusion

- We urge care to be taken when prescribing bowel preparation; particularly in those with pre-existing medical conditions and taking medications which can cause hyponatraemia - and to counsel patients when prescribing bowel preparation on the side effects.

References

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