

## Acute Pipazethate HCl (Selgon, Eipico Egypt, Egypt) Toxicity: Case Report

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### Abstract

Pipazethate HCl is a centrally acting non-narcotic antitussive which is infrequently used nowadays. The toxicity of this drug is rarely reported in the literature. We were encountered with a case of accidental ingestion of Pipazethate HCl in a 3-years-old child presented with neurological symptoms in the form of somnolence, disturbed sensorium, respiratory symptoms in the form of respiratory distress and cardiac dysrhythmias in the form of Torsade de pointes. The patient was managed at a critical care unit using supportive measures for neurological symptoms, shock state and respiratory distress. Arrhythmic complications were managed using magnesium sulphate and maintained on lidocaine infusion. After two days under observation, the child was discharged home safely.

**Keywords:** Pipazethate HCl; Torsade de pointes; Ventricular tachycardia; Lidocaine

### Introduction

Pipazethate HCl is a non-narcotic oral antitussive agent that act centrally on the medullary cough centre [1], with a chemical composition of  $C_{21}H_{25}N_3O_3S$  HCl [2]. It is less frequently used nowadays, the most common side effects of this drug include drowsiness, nausea, vomiting, restlessness, insomnia or urticarial [3]. Drug toxicity is rarely reported in the literature and it includes neurological, respiratory and cardiovascular symptoms [4]. A high index of suspicion and prompt treatment are required to improve patient prognosis [5-7].

### Case Report

A 3-years-old male child with no past medical history or surgical history, presented to our medical facility after ingestion of about 300 mg of Pipazethate HCl (Selgon, Eipico Egypt, Egypt) syrup with a disturbed level of consciousness with a Glasgow coma scale of E3M5V3, shocked with a blood pressure of 60/30 mmHg, distressed with a respiratory rate of 40 cycles per minute and bradycardia, his electrocardiogram (ECG) showed junctional rhythm at 35 beats per minute. The patient was intubated, mechanically ventilated, resuscitated, a transcutaneous pacing was placed and transferred to a critical care unit. His labs were unremarkable except for high anion gap metabolic acidosis. He received supportive treatment in the form of Gastric decontamination, IV fluids, vasopressors, IV  $NaHCO_3$ . A follow-up ECG showed normal sinus rhythm with ventricular bigeminy at a rate of 80 beats/minute. A 2<sup>nd</sup> follow-up ECG showed runs of non

sustained ventricular tachycardia alternating with normal sinus rhythm. After that, the patient developed Torsade de pointes. He was managed using IV bolus of magnesium sulphate ( $MgSO_4$ ) and maintained on lidocaine infusion with no further attacks of ventricular

tachycardia and continued the supportive measures. On the next day, the child was hemodynamically stable and extubated, kept under observation for two days with gradual improvement of conscious level and was discharged on the 3<sup>rd</sup> day of admission after total clinical resolution of all symptoms.

### Discussion

Pipazethate HCl is a non-narcotic oral antitussive agent that acts centrally on the medullary cough centre [2]. The most common side effects related to Pipazethate are drowsiness, nausea, vomiting, restlessness, insomnia and urticarial [3]. Manifestations of toxicity of this drug include a wide variety of symptoms such as neurological, respiratory, metabolic and cardiovascular symptoms [4]. Neurological symptoms include somnolence, agitation, convulsive seizures and coma. Respiratory symptoms such as Kussmaul breathing, respiratory depression and apnea. Neurological and respiratory manifestations are usually related to the central depressive effect of the drug and subsequent death is usually related to serious hypoxia [5]. While cardiovascular toxic manifestations are related to the fact that Pipazethate HCl has a quinidine-like action which is the main cause of cardiac dysrhythmias related to the toxicity of the drug in the form of prolongation of QT interval and predisposition to ventricular tachycardia and Torsade de pointes or less frequently bradycardia [6]. Metabolic and laboratory findings include severe acidosis, hyperglycemia, glucosuria and hyperkalemia [4]. Prompt diagnosis and urgent management are mandatory to prevent the lethality of the drug [5,7].

### Conclusion

The use of centrally acting antitussives is markedly decreased nowadays. Pipazethate HCl toxicity is extremely rare and to our knowledge, this is the 5<sup>th</sup> case that ever reported in the literature about its toxicity.

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