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Case Report

A case of benzydamine HCL intoxication

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Abstract. Benzydamine HCl is a nonsteroidal anti-inflammatory drug (NSAID) and is available in mouthwash, dermal cream, aerosol and vaginal douche preparations, besides other compounds administered orally or by otic drops. Acute poisoning with benzydamine HCL is associated with agitation, hallucinations, seizures and rarely somnolence. In this study, we reported a rare case of benzydamine poisoning in a girl who presented with somnolence and visual hallucinations one hour after taking five benzydamine HCL dragees orally equal with 14.7 mg/kg for suicide. An 11 years old girl was brought to our hospital because of visual hallucinations. About 1,5 hours before the admission, she received five benzydamine HCL dragees orally for suicide. Visual hallucinations appeared one hour after ingestion of the drug. She especially mentioned to see snakes and her relatives such as her father who was not in the hospital. On laboratory examination complete blood count, serum electrolytes, renal and liver function tests were normal. The patient was hospitalized with the diagnosis of acute benzydamine HCl intoxication. Gastric lavage was performed and activated charcoal (1 g/kg/dose four doses daily) was given. The hallucinations were resolved and she became symptom and sign free two hours after hospitalization. We suggest that if a patient is presented with somnolence and visual hallucinations, drug intoxication should be considered in the differential diagnosis.

Key words: Benzydamine HCL intoxication; children

1. Intruduction

Benzydamine HCl is a nonsteroidal anti-inflammatory drug (NSAID) and is available in mouthwash, dermal cream, aerosol and vaginal douche preparations, besides other compounds administered orally or by otic drops (1). Acute poisoning of benzydamine HCL is associated with agitation, hallucinations, seizures and rarely somnolence (2). In this study, we report a rare case of benzydamine poisoning in a girl who presented with somnolence and visual hallucinations one hour after taking five benzydamine HCL dragees orally equal with 14.7 mg/kg for suicide.

2. Case Report

An 11-years-old-girl was brought to our hospital because of visual hallucinations. About 1,5 hours before the admission, she received five benzydamine HCL dragees (equal with 14.7 mg/kg) orally for suicide. Visual hallucinations appeared one hour after the drug intake. She especially mentioned to see snakes and her relatives such as her father who was not in the hospital. She also noted that the surrounding walls were moving to her. The physical and neurological examinations were normal except the visual hallucinations and somnolence. On laboratory examination, complete blood count, serum electrolytes, renal and liver function tests were normal. The patient was hospitalized with the diagnosis of acute benzydamine HCl intoxication. Gastric lavage was performed and activated charcoal (1 g/kg/dose four doses daily) was given. Two hours after hospitalization, the hallucinations were resolved and she became symptom and sign free. During follow-up, no abnormalities were noted on the laboratory tests. She was discharged from the hospital on the second day of admission. She was symptom free on the second month of follow-up.

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3.Discussion

Benzydamine is a NSAID with analgesic, anti-inflammatory, antipyrexial and antimicrobial properties (1,2). Absorption through the skin and mucosa is usually low (less than 10% of total dose). After oral administration, benzydamine preparations are rapidly absorbed. Approximately the 64% of the dose is absorbed by one hour and complete absorption occurs in 4-6 hours (1). Once the drug passes to the vascular territory, it has a relative low systemic clearance (160 ml/min) but high volume of distribution (110 L) (1). After oral doses, it reaches a very high bioavailability (87%) and the plasmatic half-life is 7-8 hours. (1,3). With an increased dose, longer serum persistence has been demonstrated (4). It is metabolized by the liver and excreted both in the urine and in faces (1, 3, 4).

In recent years misuse of benzydamine have been popular among teenagers and young adolescents (5). In acute poisoning with NSAID; delirium, hallucinations, abnormal behaviors, headache, nystagmus, diplopia, tinnitus, dizziness, blurred vision, seizures, diskynesia, lethargy, loss of consciousness and coma may be seen (6-10). Several of these symptoms can occur with therapeutic doses (1). Hypotension and tachycardia are sometimes present (7,10). Vomiting is an important early sign of NSAID overdose, and abdominal pain, nausea and intestinal bleeding are also frequent gastrointestinal manifestations (7,9,11,12). Acute renal failure has been described in cases of overdose, but has been rarely reported with therapeutic doses (1,7,9,13,14). Additionally a case of topical administration of benzydamine has been reported as a cause of renal impairment (15). Granulocytosis, pancytopenia and coagulopathy may also occur in acute administration of overdose NSAIDs (9,10,16). Our case had only somnolence and hallucinations. She received five benzydamine HCL dragees (equal with 14.7 mg/kg) orally.

The treatment of overdose with benzydamine includes routine supportive therapy, gastric decontamination up to sixty minutes after the ingestion should be performed and then activated charcoal should be given (17). Urinary alkalization and force diuresis have been recommended to enhance the elimination of benzydamine (7). Due to its characteristics, hemodialysis is unlikely to enhance elimination but may be required if oliguric renal failure develops (7). There is no known specific antidote of benzydamine. In our case, we performed gastric lavage and applied activated charcoal to our patient. Urinary alkalization and forced diuresis were not performed. The response of our patient to the therapy was good and she was discharged from the hospital in good health.

In the literature, accidental benzydamine poisoning has been reported with orally receiving of topical preparations in children (1). Topical preparations have a higher quantity of benzydamine. Because of this and the feature of drug's pharmacokinetics and dynamics, if the topical drug is taken orally, the symptoms of poisoning will rapidly be appeared (1). To our knowledge, fewer cases of accidental or voluntary poisoning due to benzydamine have been reported, probably because of the difficulty of taking high doses accidentally. The amount of this drug in oral preparations is low (1). The therapeutic dose of benzydamine is 0,7-1 mg/kg/dose in adults (18). Maximum daily dose of benzydamine is four dragees for adults (200 mg/day) (18). In children, there is no data about toxic and maximal dose. Our patient received five benzydamine HCL dragees (250 mg/day) (14.7 mg/kg/dose) orally.

4.Conclusion

We suggest that if a patient is presented with somnolence and visual hallucinations, drug intoxication should be considered in the differential diagnosis.

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