

## Near-Drowning Due to Acute Dystonic Reaction Caused by Irregular Haloperidol Use

Kamaşak T\*, Arslan EA, Şahin S, Durgut BD and Cansu A

Department of Pediatric Neurology, Karadeniz Teknik University, Turkey

### Abstract

Although drug-related acute dystonic reaction is one of the known side-effects of haloperidol therapy, the number of cases reported, particularly in children, is quite low. This report discusses a case of a male child developing acute dystonic reaction, and nearly drowning, while swimming in the sea following inappropriate use of haloperidol he was taking for tic disorder. The purpose of this report is to draw attention to acute dystonic reaction that may occur, not only at times when this drug, which enjoys wide pediatric use, is started or the dosage is increased, but also due to misuse by families.

**Keywords:** Acute dystonic reaction; Haloperidol; Extrapyramidal side-effects; First generation antipsychotics

### Introduction

Although drug-related acute dystonic reaction is one of the known side-effects of haloperidol therapy, the number of cases reported, particularly in children, is quite low. This report discusses a case of a male child developing acute dystonic reaction, and nearly drowning, while swimming in the sea following inappropriate use of haloperidol he was taking for tic disorder. The purpose of this report is to draw attention to acute dystonic reaction that may occur, not only at times when this drug, which enjoys wide pediatric use, is started or the dosage is increased, but also due to misuse by families.

A 13-year-old male patient was brought to our emergency department due to near drowning following acute dystonic reaction. He had been using 20 mg/day fluoxetine and 2 drops 3 times daily of haloperidol for tic disorder for approximately the previous one year. The patient had discontinued the haloperidol therapy over the previous 10 days and ingested 10 drops at once on the day when he intended to enter the sea. He was subsequently found in an unconscious state in the water following acute neck dystonic reaction developing while swimming in the sea. Following resuscitation, the symptoms improved with benzodiazepine and biperiden therapy in the emergency department. Acute dystonic reaction is one of the most common causes of presentations to the emergency department. It is particularly known to develop following the use of antiemetic drugs such as metoclopramide and prochlorperazine, antipsychotic drugs, anticonvulsants and antidepressants. Acute dystonic reaction generally occurs within a few days after drug ingestion [1]. The period involved in our case was approximately 6 h. We attributed this relatively early reaction to irregular drug use and the ingestion of a high dose at a single time. Risk factors for acute dystonic reaction are young age, male gender, psychotic disease and the presence of previous known dystonic reaction [1,2]. It may appear with oculogyric crisis, torticollis, opisthotonus and laryngeal spasm. The condition may be life-threatening by causing obstruction of the upper airways [3]. In addition to schizophrenia, bipolar diseases and obsessive compulsive disorders, antipsychotic drugs and also used in tic and eating disorders, particularly in children [4]. The risk of extrapyramidal side-effects is greater in first generation antipsychotics, due to their greater affinity for dopamine D2 receptors, compared to second generation antipsychotics [5]. Various studies in which haloperidol therapy was compared with second generation antipsychotics and in which haloperidol therapy together with anticholinergics was compared

with other drugs were assessed by Theodore et al. in a meta-analysis [6]. They determined a much lower incidence in that metaanalysis of acute dystonic reaction when haloperidol was used together with anticholinergics compared with the use of haloperidol alone (0.6% and 4.7%, respectively). However, in that study haloperidol therapy was assessed in intramuscular treatment and in all age groups. The number of case reports of oral use of haloperidol in children is very low. This report discusses a case saved from drowning following acute dystonic reaction developing in association with haloperidol use. We wish to emphasize the extrapyramidal side effects that may develop with the use of such drugs may be life-threatening. Our case was luckily saved from drowning at the last minute. We think that caution is required not only when these drugs are started, but also when dosages are increased. We also think that clinicians must be more aware of side-effects that may develop with the irregular use of such drugs and must be sure that they give families accurate information. Insufficient information is available concerning the side-effects of haloperidol used in combination with anticholinergics, and we think that future cases in this area and cases comparing it with second generation antipsychotics will increase our experience on this subject.

### References

1. Guler G, Yildirim V, Kutuk MO, Toros F (2015) Dystonia in an adolescent on risperidone following the discontinuation of methylphenidate: a case report. *Clin Psychopharmacol Neurosci* 13: 115-117.
2. Rodnitzky RL (2012) Movement disorder emergencies. In: Roos KL (Ed) *Emergency neurology*. Springer Science Business Media, New York.
3. Munhoz RP, Moschovitch M, Araujo PD, Teive HA (2012) Movement disorders emergencies: A review. *Arq Neuropsiquiatr* 70: 453-461.
4. DuBois D (2005) Toxicology and overdose of atypical antipsychotic medications in children: does newer necessarily mean safer? *Curr Opin Pediatr* 17: 277-233.

\*Corresponding author: Tülay Kamaşak, Department of Pediatric Neurology, Karadeniz Teknik University, Turkey, Tel: 905364183838; E-mail: [tkamasak@hotmail.com](mailto:tkamasak@hotmail.com)

Received December 07, 2015; Accepted February 11, 2016; Published February 21, 2016

**Citation:** Kamaşak T, Arslan EA, Şahin S, Durgut BD, Cansu A (2016) Near-Drowning Due to Acute Dystonic Reaction Caused by Irregular Haloperidol Use. *Med Rep Case Stud* 1: 101.

**Copyright:** © 2016 Kamaşak T, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

5. Vitiello B, Correll C, Zwieter-Boot BV, Zuddas A, Parellada M, et al. (2009) Antipsychotics in children and adolescent: increasing use, evidence for efficacy and safety concerns. European Neuropsychopharmacology 19: 629-635.
6. Satterthwaite TD, Wolf DH, Rosenheck RA, Gur RE, Caroff SN (2008) A meta-analysis of the risk of acute extrapyramidal symptoms with intramuscular antipsychotics for the treatment of agitation. J Clin Psychiatry 69: 1869-1879.

**Citation:** Kamaşak T, Arslan EA, Şahin S, Durgut BD, Cansu A (2016) Near-Drowning Due to Acute Dystonic Reaction Caused by Irregular Haloperidol Use. Med Rep Case Stud 1: 101.

#### **OMICS International: Publication Benefits & Features**

##### **Unique features:**

- Increased global visibility of articles through worldwide distribution and indexing
- Showcasing recent research output in a timely and updated manner
- Special issues on the current trends of scientific research

##### **Special features:**

- 700+ Open Access Journals
- 50,000+ Editorial team
- Rapid review process
- Quality and quick editorial, review and publication processing
- Indexing at major indexing services
- Sharing Option: Social Networking Enabled
- Authors, Reviewers and Editors rewarded with online Scientific Credits
- Better discount for your subsequent articles

Submit your manuscript at: <http://www.omicsgroup.org/journals/submission>