

Drowning in 12-month-old Boy Who Was Later Diagnosed with Epilepsy: A Case Report and Review of Literature

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Abstract Introduction: Drowning is an event of respiratory disturbances due to submersion in water, resulting in survival with or without complications, or death. Several risk factors for drowning are epilepsy, male, intentional accidents (neglected/abused or murdered), and lack of supervision. Objective: The aim of this study is to describe a case of drowning, with epilepsy as a risk factor. Case Presentation: A 12-month-old boy was presented due to drowning in a fish pond. He was referred from a district hospital after receiving cardiopulmonary resuscitation. There was an escalation in respiratory problems. While he was planned for discharge he had general tonic clonic seizure. After conducting electroencephalogram, he was diagnosed with epilepsy. We can't identify whether he drowned due to lack of supervision or seizure in the pond. Conclusion: Finding a risk factor is one of the most important management in drowning. Epilepsy is one of the risk factor, which symptom is not always noticed by parents. Although denied, we still have to do rigorous anamnesis to find epilepsy until it is proven otherwise..

Keywords: *drowning, risk factor, epilepsy*

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1. Introduction

Drowning causes an annual mortality of half a million people worldwide.[1] This is an event of respiratory disturbance due to prolonged submersion in water with the final result of death, or survival without or with complications. There are several terms related to drowning incident which must be understood. The victim may die due to asphyxia while being in the water or after evacuation, or survival [2].

Most of the victims are under 5 years old. The incident locations varied according to victim' age. In children <1 year old, the locations mostly occurred indoor (78%) such as at bathtubs, artificial ponds, buckets, washing machine and toilet. [2,3,4] During the last 10 years (2005–2015), our hospital reported 15 drowning cases, 14 survived and 1 patient died. Most of the cases (14) were children (1–12 years of age).

Rates of drowning vary with age, gender, and race. Drowning are more common in epilepsy, male, intentional accident (neglected/abused or murdered) and lack of supervision. The most important intervention to improve

outcome from drowning is prevention. Therefore, in every drowning case we should notify the risk factors in order to do further prevention. Preventive efforts should focus on adequate supervision, pool fencing legislation, and water safety education, especially in epilepsy children [5].

There are several terms related to drowning incident which must be understood. Good report of drowning case is also very important to improve knowledge base, epidemiological stratification, and appropriate treatment of victims of drowning, and ultimately save lives. This case raises an important issues with regard to find risk factor of a drowning child in order to prevent repeated event in epilepsy patient [2].

In this report we present a case of a twelve-month-old boy who drowned, later had seizure, and finally diagnosed with epilepsy. It was difficult to determine whether seizure was a complication or precipitating event prior to drowning.

2. Case Report

Twelve-month-old boy was presented to pediatric emergency of Hasan Sadikin Hospital as a referral case