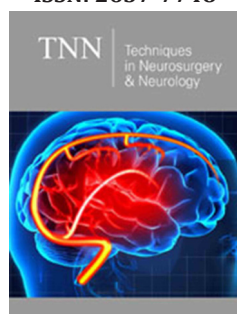


Sporadic Hemiplegic Migraine - The First Onset: A Case Report

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Abstract

Migraine is a neurological condition that presents as an intense pain localized to one side of the head. Sporadic Hemiplegic Migraine (SHM) is a rare type of migraine. Symptoms further include aura and hemiplegia. This case report recounts the first onset of sporadic hemiplegic migraine in a 10-year-old child with intense right-sided pain in the head and tingling sensation of the right hand, which progressed to complete numbness of the right hand and arm. This case report can be used to illustrate the complexities of migraine diagnosis.

Keywords: Headache; Migraine; Aura; Sporadic hemiplegic migraine

Introduction

Migraine is a health condition that is characterized by an intense throbbing pain, usually on one side of the head. In addition to the moderate to severe head pain, migraine symptoms can include mood changes, decreased concentration, nausea, vomiting and sensitivity to light, sounds and odors. Migraine can be subdivided into many different categories depending on the specific set of symptoms presented. Migraine can be classified as either migraine with aura or migraine without aura. Migraine with aura further includes symptoms such as flashes of light, blurred vision, blind spots, difficulty speaking, tingling and numbness. One such category of migraine with aura is Hemiplegic Migraine (HM), which is associated with motor weakness or hemiplegia. HM can be further subdivided into Familial Hemiplegic Migraine (FHM) and Sporadic Hemiplegic Migraine (SHM). FHM can be differentiated from SHM because people who experience FHM have a first-or second-degree relative who also experiences HM, whereas individuals with SHM do not have a first-or second-degree relative who also experiences HM. Patients with Sporadic hemiplegic migraine present with severe headache, photophobia, numbness, tingling, paresthesia, dysarthria and temporary muscle weakness, which can last from minutes to days. Also, minimal data is available in terms of pathophysiology and treatment of sporadic hemiplegic migraine. Prompt diagnosis, however, can be challenging given the multiple and rare forms of migraines. As a result, treatment is often delayed, to the patient's detriment [1]. Clinical manifestations of hemiplegic migraine range from attacks with short-duration hemiparesis to severe forms with recurrent coma and prolonged hemiparesis, permanent cerebellar ataxia, epilepsy, transient blindness or mental retardation [2].

There are four phases to a migraine attack: Prodrome, aura, headache and postdrome. Prodrome occurs 24 hours before the headache begins, aura can occur five to 60 minutes before, the headache can last four to 72 hours and postdrome can last up to 48 hours after. While there is no exact cause for migraine, genetics is thought to play a role in some migraine types. Possible migraine triggers include stress, sleep deprivation, skipping meals, dehydration, coffee, chocolate and hormonal changes. Blood testing, CT scans and MRI cannot be used to diagnose a migraine, but they can be used to rule out other possible conditions as part of a

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differential diagnosis. Healthcare providers must therefore rely on patient history, physical examination and neurological examination when diagnosing migraine. While there is no cure for migraine, over-the-counter or prescription medication can be taken to help with the headache. Lifestyle modifications can be made to avoid migraine triggers [2-4]. In Sporadic Hemiplegic Migraine (SHM) diagnosis, imaging is considered part of the differential diagnosis to rule out other causes. The most typical differential diagnoses of SHM include epilepsy, Transient Ischemic Attack (TIA) and stroke. The motor symptoms during epileptic attacks and TIAs neither have a gradual progression nor a postictal typical headache phase. Furthermore, metabolic abnormalities associated with meningitis/encephalitis, carotid dissection, antiphospholipid syndrome, systemic lupus erythematosus and ornithine transcarbamylase deficiency should also be considered as differential diagnoses, in addition to other causes that mimic SHM [5].

Case Presentation

A 10-year-old female patient presented to her pediatrician with intense right-sided pain in the head. During class at school, the patient first presented with symptoms, including a tingling sensation in the right hand, which progressed to complete numbness of the right hand and arm. There were no precipitating factors to explain the sudden onset of numbness. After a few minutes, the patient began to experience pain in the right side of the head. With time, the pain increased. This was the first time the patient had experienced these symptoms. The patient was finally referred to the school nurse, who attempted to massage the right hand to restore sensation, but was unsuccessful. The patient was then taken to her pediatrician due to the severe unilateral head pain. By this time, sensation had returned to the right hand and arm. The pain on the right side of the head persisted. The pediatrician was unable to diagnose the patient's condition, but prescribed Ibuprofen to help with the pain. The patient took one 200-mg Ibuprofen tablet. The family's physician was consulted for a diagnosis and the patient was diagnosed with a migraine. Upon returning home, the patient was still experiencing pain, though the pain had stopped increasing. The patient decided to go to sleep in an effort to ignore the pain and slept for about four hours. Upon awakening, the patient realized that the pain had now gone, although a lingering throbbing sensation in the head persisted into the next day. After two days from the initial onset of symptoms, the patient was no longer experiencing any migraine symptoms. The patient did not experience any lasting effects from the migraine.

Discussion

Migraine is a debilitating health condition, affecting over one billion people worldwide and is more common in women than in men [6]. However, diagnosing migraine is not always done correctly. In this patient's case, it took three healthcare providers for a diagnosis of migraine to be reached. This prolonged period causes the patient to experience their symptoms for an extended period before a diagnosis can be made and a treatment suggested. With migraine being such a prevalent condition, more awareness should be given to diagnosing migraine in an effort to increase healthcare provider efficiency and decrease patient suffering. Sporadic Hemiplegic Migraine is rare among migraineurs, with a tiny percentage of the population suffering from it. Differential diagnosis is helpful to rule out other comorbidities, but it is not effective in the diagnosis of Sporadic Hemiplegic Migraine. In the differential diagnosis, the patient undergoes diagnostic tests, including blood tests and CT / MRI scans. In many countries, MRI and CT scanners are scarce or unavailable and even when available, patients cannot afford an MRI or CT scan or any of the expensive laboratory tests. In such cases, the physician must arrive at a diagnosis based on the patient's history and examination [7].

Conclusion

There is still a long way to go in migraine research. There is no known cause for migraines. There is no single diagnostic tool that healthcare providers can use to diagnose migraines effectively. There is no discovered cure for patients to take to be rid of migraines indefinitely.

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