

Case report

Newly onset: sudden & severe headache in a patient who overused analgesic

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Abstract:

This case report presented a rare cause of severe headache in a patient who developed episodes of acute severe headache for the first time. The earliest accurate provisional diagnosis is crucial for a new onset severe headache in adult. A good history taking and high index of suspicious are remained the most important clinical component in managing severe first time headache in adult. The differential diagnosis of subarachnoid hemorrhage, space-occupying lesion with increased intracranial pressure, acute intoxication, meningo-encephalitis and others must be ruled out as these conditions are benefited in early management. In this patient, progressive development of headache is masked by severe intense headache, which later will be described as acute headache. The causes of newly onset severe intense headache will be discussed in the discussion.

Keywords: newly onset; progressive headache; severe headache; analgesic overused

*Bangladesh Journal of Medical Science Vol. 14 No. 04 October '15. Page: 399-401
DOI: <http://dx.doi.org/10.3329/bjms.v14i4.25806>*

Introduction

Headache is defined as diffuse pain in various parts of the head. Most of the time, headache is poorly localised as the pain is undifferentiated and not correlates with the nerve distribution. It affects both men and women. Duration of headache during 12-month period is slightly higher in woman as compared to man, 95% and 91% respectively¹. Headache is further classified as primary or secondary based on the pathology to facilitate the clinician to manage its clinical presentation². Managing acute and severe headache in the primary care setting is a diagnostic challenge. A thorough clinical assessment comprises of comprehensive history taking and physical examination need to be carried out. Appropriate investigations to rule out life threatening causes are the best strategy leading to earlier diagnosis and treatment. In this case report, the first time and the worst headache the patient ever had warrant an urgent investigation and management. This case report will highlight the relevant history, clinical finding and investigation in order to come to a diagnosis and to rule out life threatening causes of

acute, new onset severe headache in an adult.

Case report

We report a 45-year old Malay lady with acute severe headache for the first time. The first episode of headache was acute onset precipitated by mild straining during defecation, localized over the frontal area of the scalp, throbbing in nature, very severe intensity with pain score of 9/10. Patient had to lie down, incapacitated, felt like her head was going to break off and kept holding her head tightly to alleviate the suffering. The headache was associated with lacrimation. There was no history of aura, nausea, vomiting or photophobia. The patient was not known to have hypertension or migraine before. She was brought to the Emergency Department (ED) for acute pain management.

Physical examination revealed the blood pressure was high, 170/117 mmHg but then gradually return to normal within 3 hours with rest and general pain management. Her pulse rate was 100 per minute and afebrile. She was alert to time, place and person, cooperative, but appeared in severe

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pain and kept holding the top of her head. Pupil examination was normal; cranial nerves were intact. The gait was normal and there was no neurological deficit identified. The pain gradually improved after receiving paracetamol 1000mg and celecoxib 200 mg after 3 hours of intolerable pain. She was discharged home and was asked to come back to ED when necessary if the headache recurred.

The second episode of similar acute severe headache occurred 36 hours after the first episode. The intensity and nature of pain was similar and also precipitated by mild straining while initiating defecation. Patient took paracetamol 1000mg and celecoxib 200 mg immediately after the second attack, however the headache persisted for 3 hours and gradually subsided later. In between the headache episodes, patient was able to do her daily activity as usual. The internal medicine physician was consulted and physical examination including the eyes was normal. A plain computed tomography (CT) of the brain was taken, and it revealed a normal finding. No hemorrhage or infarcted brain parenchymal noted. A neurologist was consulted after the second episode of headache, and a CT scan brain angiography was planned on the next day to rule out the possibility of subarachnoid hemorrhage or bleeding aneurysm. The result of CT angiography was normal.

Further history revealed that the patient has been having chronic pain secondary to failed back surgery of prolapsed intervertebral disc for the past 15 years. She was on multiple type of analgesic and has been taking celecoxib frequently especially during flare up episodes. After the second episode of headache, since all investigation were normal a provisional diagnosis of cluster headache secondary to chronic celecoxib overused were made and the patient was advised to stop taking celecoxib. The pain specialist prescribed her opioid analgesic for her chronic neuropathic pain. The third episode of headache developed 24 hours after the second episode, but lasted for 20 minutes. The character and nature of the pain is similar but lesser in intensity. Consequently after a week of stopping celecoxib, another episode of headache occurred but it was much less in severity.

Discussion

The most challenging part in managing this patient was to make an accurate diagnosis as early as possible. The medical officer at ED managed the first episode of headache and the patient was discharged home without further investigation. According to the International Headache Society, the first episode of a severe headache cannot be classified as migraine

or tension-type; these diagnoses require multiple episodes of pain with specific characteristics (i.e. nine episodes for the diagnosis of tension headaches and four for migraine).² The first headache therefore requires specific evaluation.² Follow up with respective discipline especially neurology specialist need to be arranged as the assessment on organic causes need to be carried out to rule out other life-threatening primaries.²

Primary headache disorders are eventually established as the cause of headaches in most patients. In most circumstances, primary headache is not a life-threatening event but these symptoms cause bad experiences and stressful event to the patient. Benign headache types include migraine, other vascular, or tension headache. The responsibility of the emergency physician (EP) is to rule out life threatening causes of headache, provide prompt effective pain management and other indicated treatment, appropriately use resources in the evaluation of the headache, and arrange early and easy follow up. On the other hand, in the clinical practice, not all cases of headache presented and reviewed in ED is due to other reasons.³

A review of the medical literature has described the final diagnoses of undifferentiated headaches presenting to the ED as non-intracranial infection (39%), tension headache (19%), miscellaneous causes (15%), post-traumatic (9%), hypertension related (5%), vascular/ migraine (4%), no diagnoses (6%), subarachnoid hemorrhage (0.9%) and meningitis (0.6%).⁴ Subarachnoid hemorrhage (SAH) is responsible for 12-33% of headaches in patients with normal neurologic exams but the patient described the headache as the “worst headache of their lives”. SAH has about 50% case fatality.⁵

The mortality of untreated SAH is over 50% with up to 20% of deaths occurring in the first day. The initial bleed can be fatal, and is described as a “thunderclap” headache in 20-50% of patients with SAH. Many patients (between 15-40%) have warning headaches (“sentinel bleeds”), occurring days to weeks before the index episode of bleeding. The pathophysiology involve is via the limited leakage of blood from an aneurysm.⁶

The presentation and neurologic findings are subtle and their ambiguity creates few potential differential diagnoses. High risk characteristics for the first time headaches include headaches occurring in patients over 40 years old, associated with exertion, female gender, hypertension, cigarette smoking, presenting with memory impairment, ataxia, drowsiness,

sensory loss or signs of meningeal irritation. Other high-risk characteristics include fever, photophobia, tender pulsatile temporal arteries, progressive visual changes, confusion, weakness, pupillary asymmetry and loss of coordination.⁶

Most of the time, CT brain angiography revealed no evidence of subdural haematoma or other brain pathology. On the other hand, if the headache is acute onset, very severe, episodic presentation every 24 hours to 1 week, 15 minutes to 3 hours duration and associated with lacrimation; it is most likely to be cluster headache. The provisional diagnosis is by ruling out other life threatening causes of secondary headache.⁷ Cluster headache (CH) pain is considered the most severe of the primary headache syndromes and is severe, strictly unilateral pain,

typically in the retro-orbital and fronto-temporal areas, associated with symptoms and signs of cranial autonomic dysfunction (tearing, conjunctival injection, rhinorrhea/nasal congestion, and Horner's syndrome) ipsilateral to the pain. Patients typically pace restlessly during an acute attack. The hallmark of CH is the circadian periodicity of the attacks.^{7,8}

Conclusion

Newly onset, sudden severe headache required an urgent and thorough clinical assessment. Although primary headache is more prevalence, the outcome of secondary headache could be fatal. The most likely headache of the above patient is cluster headache and the other possibility of headache secondary to overused celecoxib is highly recommended.

References:

1. Linet MS, Stewart WF, Celentano DD, Ziegler D, Sprecher M. An epidemiologic study of headache among adolescents and young adults. *JAMA*. 1989; 261: 2211–6.
2. *The International Classification of Headache Disorders*, International Headache Society 2013, SAGE publication.
3. Godwin A, Villa J. Acute headache in the ED: Evidence-based evaluation and treatment options. *Emergency Medicine Practice* 2001; 3:1-32.
4. Leicht MJ. Non-traumatic headaches in the emergency department. *Ann Emerg Med* 1980; 9:404-409.
5. Frishberg BM. The utility of neuroimaging in the evaluation of headache in patients with normal neurologic examinations. *Neurology* 1994; 44:1191-1197.
6. Jakobson K, Saveland H, Hillman J, et. al. Warning leak and management outcome in aneurysmal SAH. *J Neurosurg* 1996; 85: 995-999.
7. Ashkenazi A, Schwedt T. Cluster Headache-Acute and Prophylactic Therapy. *Headache* 2011; 51:272-286. doi: 10.1111/j.1526-4610.2010.01830.x.
8. Halker R, Vargas B. Cluster headache: Diagnosis and treatment. *Semin Neurol* 2010; 30(2):175-85. doi: 10.1055/s-0030-1249226. Epub 2010 Mar 29.