CASE REPORT

Late Onset Mania Post Dengue Fever in an Elderly Patient: A Case Report

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Abstract

Manic symptoms secondary to post dengue fever are rare or might be under-reported. Awareness of this phenomenon is important for therapeutic considerations of patients. We present a case of late onset mania in an elderly gentleman who developed manic symptoms post dengue fever.

Keywords: Mania, Dengue Fever, Elderly Patient

Introduction

Dengue viruses, single stranded RNA viruses of the family Flaviviridae, are the most common cause of arboviral disease in the world [1]. In Malaysia, the dengue situation has worsened with an increasing number of reported cases and deaths during the last decade [2].

The spectrum of dengue fever includes, benign self-limiting disease to multi organ dysfunction syndrome with variable mortality. Atypical manifestations and uncommon clinical pattern of presentations, have been increasingly noticed since the last few years [3]. One of the uncommon atypical manifestations of dengue fever is psychiatric presentation.

Neurological and psychiatric involvement in dengue patients can be due to the infection itself with viral encephalitis or secondary to metabolic disturbances [4].

We present a case of late onset mania in an elderly gentleman post dengue fever. His manic symptoms worsened after his illness was complicated with epididymo-orchitis.

Case report

Mr. CHY, a 60 years old married Chinese gentleman, a retired small business owner, with education level up to Form 5, developed an episode of mania after dengue fever. He had underlying hypertension diagnosed 6 years ago but was not compliant with antihypertensive. There was no family history of psychiatric illness or past psychiatric contact. Histories of seizure, head trauma, or substance abuse were absent.

Mr. CHY was initially admitted to Medical Ward for dengue fever and was discharged well on Day 8 of illness in recovery phase. However, he soon presented 1 week later with irritability, increased goal directed activities, talkativeness, increased energy...
and reduced need for sleep. There were no features to suggest delirium such as fluctuating or altered consciousness level. He was easily irritable towards his family members over trivial issues which was unlike his usual self. He kept rearranging furniture around the house but in odd inconvenient positions with the intention to make the house looked like a palace so he could invite people to come over; he cleaned the toilet vigorously multiple times as he felt the toilet was still not clean; as well as exercising almost every waking hour. Furthermore, he planned to study all the religions in the world - especially Christianity and Buddhism with the purpose of finding the best religion and aspired to be a pious man, close to God in order to attain youth and longevity. He also wished to travel to Kuala Lumpur as well as other states to make new friends. His sleep was disturbed, only sleeping for 2 to 3 hours at night as he had too many things to do. He saw some black images in the toilet and maggots on the table but there were no other psychotic symptoms such as auditory hallucinations or delusions. Otherwise, there was no identifiable stressor prior to the onset of illness except for his recent admission. His premorbid personality was described as quite a sociable, and good-natured man.

Upon mental status examination, he appeared of stated age and had poor eye contact. He was preoccupied with doing exercises and frequently changed his position from lying down to standing and squatting. His speech was increased in amount but with normal volume and rate. His mood was elated with restricted affect. There were no perceptual disturbances or thought disturbances noted. He had poor insight of his illness with poor judgement but was alert and orientated. Physical examination did not reveal any neurological deficit.

The acute onset, elderly age and recent dengue fever raised suspicion of a mood disorder secondary to organic cause. Initial investigations showed hyponatremia and hypokalemia with levels of 127mmol/l and 3.2mmol/l respectively. Other blood parameters including complete blood count, liver function tests, serum cortisol and thyroid function test were within normal limits. Brain computed tomography (CT) showed no significant findings. Blood levels normalized following fluid replacement and oral potassium replacement. Meanwhile, his blood pressure readings remained within normal range throughout admission therefore he was not restarted on any antihypertensive.

However, he continued to display manic symptoms. He was diagnosed with mood disorder secondary to dengue fever and his progress was reviewed daily by the Psychiatry Team in the Medical Ward. He occupied himself with reading pamphlets and books on Christianity and Buddhism that were brought by his family members upon his request, as well as exercising and tidying his bed area during most of his time in the ward. He was stubborn and irritable whenever his family members advised him to rest but there was no aggressive behavior during the admission. He was subsequently discharged home with Tab Olanzapine 2.5mg ON and Tab Zolpidem 5mg PRN with scheduled Psychiatry appointment in 1-week time to review his condition.

However, he presented to the Emergency Department 3 days later with worsening manic symptoms and hence admitted to the Psychiatric Ward. Family was particularly concerned of his labile mood. He was easily irritable and had impending physical aggression including wanting to hit his wife and almost hitting his son with a stick. Most of his time was spent on rearranging
furniture around the house, cleaning the compound to prevent mosquito breeding, and also practicing Yoga for long hours up to 6 hours every day. Unnecessary purchases were made which included spending spree of more than RM300 of 3 trolleys of food at the supermarket using his credit card. He was adamant to use his credit card up to RM10,000 so he could get himself a free phone as advertised on television but managed to be stopped by his family. He was much more talkative and overfriendly with inflated self-esteem stating that he was a wealthy, clever man and had made many new friends. He had plans to start an online venture by selling his own household items such as toy cars and vases, and wanted to drive recklessly to cause own motor vehicle accident in order to file a car insurance claim.

Upon mental status examination, he was overfriendly and talkative with elated mood. He demonstrated poor insight and judgement. Otherwise, he was alert and orientated. On physical examination, he was febrile with temperature of 38°C and noted an erythematous, tender right testicular swelling along with erythematous swollen left forearm. Blood investigations showed significantly elevated white cell count with level of 30x 10^9/L, raised C reactive protein at 242.5ml/L and hyponatremia at level of 125mmol/L. Blood culture grew Staphylococcus aureus. He was referred to Urology Team and Medical Team and was diagnosed with right epididymo-orchitis, and Staphylococcus aureus bacteremia. Intravenous antibiotic was commenced for the concurrent infections. He was consequently transferred to Medical Ward for further investigation and management. Lumbar puncture was done with normal cerebrospinal fluid (CSF) analysis. Intravenous antibiotic was continued for 1 week. Clinical improvement was observed within the next few days with reducing trend of white cell count and C reactive protein, normalized sodium levels with gradual reduction of the scrotal swelling. Repeat blood culture showed no growth. However, he was still diligently performing exercises, energetic, talkative and irritable. Thus, he was transferred back to Psychiatry Ward for continuation of management. Olanzapine was titrated to 15mg OD, and Sodium Valproate was added with gradual improvement in his psychiatric symptoms. Psychoeducation was given to patient and family. He was discharged well on Day 17 of admission with Tab Olanzapine 20mg OD, Tab Sodium Valproate 200mg ON and oral antibiotic. Upon subsequent follow ups, he remains well with no depressive, manic or psychotic symptoms. He remains compliant with medications with presence of good family support.

**Discussion**

Late onset mania may have a different pathophysiology from earlier onset cases. It may represent a secondary condition to cerebral disorders associated with aging and indirectly carries a high risk of early mortality, particularly in men [5]. Review of published case reports revealed that most of late onset mania have suspected underlying organic causes which included vascular causes, iatrogenic drug use, electrolyte imbalance, dementia and thyroid disease. Treatment of infection contributes to successful remission of the manic episode [6]. Secondary mania in older adults is a serious medical condition that requires a comprehensive differential diagnosis. Older adults are more susceptible to disorders that can lead to secondary mania, thus a thorough past psychiatric history is essential [7].
In this particular case, the patient developed mania post dengue fever. Study showed that a fraction of dengue patients exhibits psychiatric symptoms. During the acute phase, nearly all the patients exhibited thanatophobia (fear of death, 90.3%). Over 80% of the subjects had panic attacks. During the recovery phase (at the end of first week), all the observed psychiatric symptoms decreased both in frequency as well as severity[8]. Psychiatric disorders can emerge even in the post dengue convalescence phase [9].

In addition, this patient had no family history of mental illness and no recent stressor that might induce his manic symptoms. The emergence of manic symptoms in the absence of risk factors such as a personal and a family history of bipolar illness or cyclothymia as well as an onset after dengue fever, suggests an organic condition which is responsible for mania [10].

The neuropsychiatric manifestations of dengue fever are not well understood. Some tropical diseases are the direct cause of severe disturbances of cerebral function while others affect only finer cerebral systems controlling fear, anxiety and personality traits. Neuropsychiatric symptoms may be caused by a number of different mechanisms including bacterial toxins, release of cytokines, hyperthermia, shock (poor perfusion), acute renal insufficiency, pulmonary failure (shock lung), coagulopathy, disruption of the blood-brain barrier, and/or the nest of pathogens into the central nervous system [11]. In addition, the pathophysiology of neurological complications of dengue fever also is not well understood. It can be related to neurotropic effect of the virus, systemic effects of the infection and can be immune mediated [12].

Moreover, mood disorders appear to have a strong association with inflammation. The mechanism of this relationship is still being clarified; however, pre-clinical evidence suggests that raised cytokines act at multiple levels to induce mood symptoms. Accumulating evidence attributes inflammation as a critical mediator in the pathophysiology of mood disorders. Indeed, elevated levels of pro-inflammatory cytokines have been constantly demonstrated in both major depressive disorder (MDD) and bipolar disorder (BD) patients [13].

Thus, knowledge of the neuropsychiatric symptoms accompanying dengue fever is important in order to increase the awareness of these problems. However, this area is not well understood and warrants further study.

References


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