

# Loss of appetite and strength in the geriatric population: possible diagnostic symptoms for dengue

Ajay Hotchandani<sup>1</sup>

## Abstract

In dengue endemic regions, a chief complaint of nocturnal fever is often a pathognomonic phrase that triggers an investigation for dengue. This article looks at cases of patients who were tested for dengue based on their symptoms of weakness and loss of appetite, without fever as it was absent in most cases. The article also examines the changes in weight that occur after diagnosis of dengue and compares it to weight loss (if any), that occurred prior to the diagnosis. Dealing with the anorexia and weight loss is challenging for physicians, patients and family members.

## Keywords

Dengue, geriatric, appetite, anorexia, weakness, lack of fever

## ■ INTRODUCTION

■ Dengue is caused by the Dengue Virus (den1-4), which is a Flavivirus (RNA-virus), spread by the Aedes aegypti mosquito. It is prevalent in the tropical climate countries, as the environment is ideal for breeding mosquitoes. Approximately 100 million people are affected by dengue yearly, making it a leading cause of death in the tropical and subtropical regions [1]. Its effects range from asymptomatic disease to death due to fulminant shock and haemorrhage.

Symptoms include sudden onset of fever, headache, retro-orbital pain, and back pain, along with severe myalgia giving rise to the colloquial designation “Break-bone fever”. Additional symptoms include anorexia, nausea or vomiting, marked cutaneous hypersensitivity and a macular rash, starting at the trunk and spreading to the extremities and the face [2]. Fever being the prevalent symptom, dengue is also often referred to as Dengue Fever. In a review of dengue on the following websites - CDC.gov, medicinenet.com, webmd.com, medlineplus.com and Wikipedia.com – anorexia is not listed as a symptom. It is presented as a mere footnote in Harrison’s Principle of Internal Medicine [2] and WHO 2009 guidelines for diagnosis, treatment, prevention and control of dengue [4]. It is however included in The Principles of Medicine in Africa [9].

Since most clinicians are trained to recognize fever as the primary symptom, its absence may cause this entity to go undiagnosed. The fact that anorexia was the main presenting complaint in our cohort of geriatric patients underscores the importance of this observation, since subsequent malnu-

trition and weight loss may complicate recovery. We present a collection of 10 cases seen at Mercy Clinic – NHI in Belize, Central America from August-September 2013.

## CASES

From August – September 2013, there was a spike in the number of Dengue cases seen at the clinic. On average, around the rainy season, there is about 1 case per month. This year, over a six-week period, there were 10 confirmed cases.

The two most common presenting symptoms of the 10 patients that triggered testing for dengue were chief complaints of loss of appetite and/or feeling weak. Of the ten cases, only one presented with a chief complaint of fever, while another said he had chills, but the chief complaint was loss of appetite/weight.

The cases reviews examined the following parameters: age, sex, weight at three, two and one month prior to diagnosis, at the time of diagnosis, and one month after (if available), symptoms – fever, rash, headaches, body aches, bleeding, loss of appetite and weakness, laboratory tests – IgG, IgM, and CBC (complete blood cell count). Whether or not the patient was diabetic was also recorded.

The average age of patients was 71.9 years old. There were four male and six female patients. The two most common presenting symptoms that patients complained of were loss of appetite (8 out of 10) and weakness (9 out of 10). Conversely, only 2 of the 10 patients complained of fever; none complained of rash or bleeding; two complained of body

<sup>1</sup>Corresponding author: MD, General physician, Belize City, Belize  
Email: mercyclinicmd@gmail.com

## Symptoms at the time of Dengue diagnosis

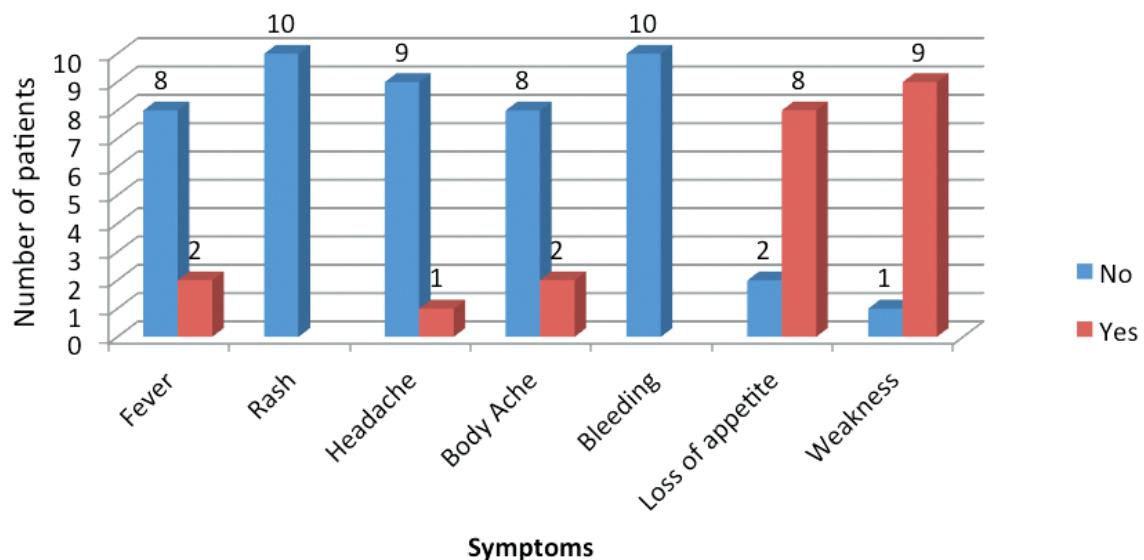


Figure 1: Symptoms patients presented with at the time of diagnosis with dengue.

ache, and one of a headache (Figure 1).

A lack of appetite could lead to a change in weight; hence, the weight changes pre and post diagnosis of dengue were examined to ensure that the weight loss was attributable to the dengue and not to any pre-existing conditions. The overall weight difference before diagnosis was an average weight gain of 0.25 pounds (0.11kg). At the time of diagnoses, the average weight loss was 7.3 pounds (3.31kg), with the most dramatic weight losses being 24 pounds (10.9kg) and 15 pounds (6.8kg) in one month or less (Figure 2).

count fell below the 150,000  $\mu$ L level at 89,000  $\mu$ L. It was followed up two days later where it increased to 112,000  $\mu$ L. The patient denied any history of bleeding. Four patients were diabetic.

### MANAGEMENT AND OUTCOME

There are no specific antiviral drugs for dengue; however, maintaining proper fluid balance is important.[3] Treatment is supportive, varying

from oral rehydration therapy at home with close follow-up, to hospital admission with administration of intravenous fluids and/or blood transfusion.[4] In our cases, all ten were treated as outpatients, and no hospital admission was required; of the two patients who had noted fever as a symptom, both were afebrile at the time of the visit to the clinic. Acetaminophen (Paracetamol) was recommended, along with rest and oral rehydration, as a standard treatment for all patients. The dosage of hypoglycaemic agents for diabetics was adjusted according to their anorexia.

Unintentional weight loss and undernutrition are common problems in the elderly. [5-8] Our patients were advised to add a liquid high energy dietary supplement.

### ■ DISCUSSION

Although fever is the hallmark symptom of Dengue/Dengue Fever, testing for dengue in the absence of fever may be necessary for geriatric patients in endemic regions. There is no dispute with the guidelines put forth by the World Health Organization, but an additional awareness of symptoms of anorexia in geriatric patients should be closely followed up. Anorexia can wreak havoc for an elderly patient. Furthermore complications can arise

if the patient is taking a concomitant medication that can reasonably lead to hypoglycaemia. An unintentional decline in weight is always a great cause for concern. A positive dengue test, with no previous history of weight loss, may lead to the reasonable conclusion that the weight loss is due to the dengue.

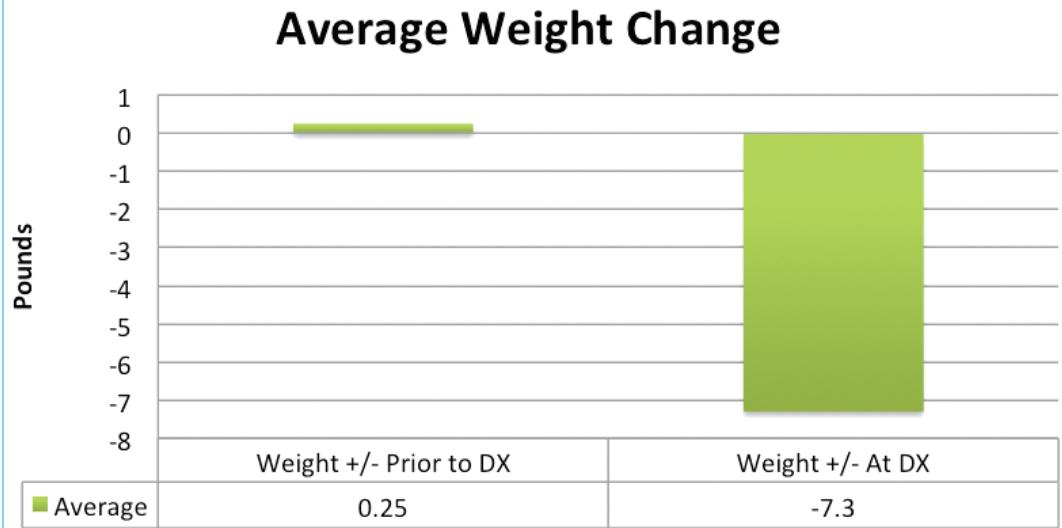


Figure 2: Average weight change (pounds) that occurred during dengue.

Testing was done using the Dengue Rapid Test at a local laboratory. It should be noted that in the six week period, a total of ten patients were tested and all were IgM positive, and eight were IgG positive. A positive IgM indicates the patients were recently infected. Only one patient's platelet

A sudden decline in strength was also a very prevalent symptom. While it is a subjective feeling that cannot be quantified, it is a very important piece of information.

'Globally, the reported incidence of dengue has been increasing. Although climate may play a role in changing dengue incidence and distribution, it is but one of many factors; given its poor correlation with historical changes in incidence, its role may be minor. Other important factors potentially contributing to global changes in dengue incidence and distribution include population growth, urbanization, lack of sanitation, increased long-distance travel, ineffective mosquito control, and increased reporting capacity.' [1]

## ■ CONCLUSION

It is important for physicians to test for dengue if a geriatric patient, in an endemic region (Figure 3), presents with chief complaint(s) of anorexia and/or weakness in the absence of

not the disease itself that causes the greatest concerns to the patients and health care providers, but rather what ensues afterwards.

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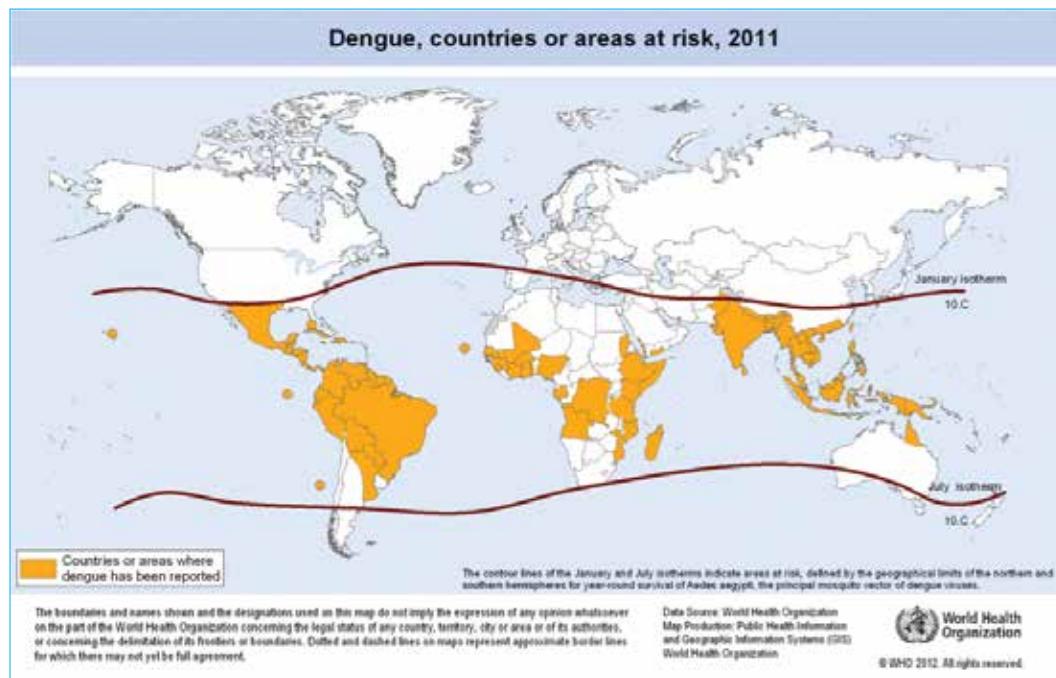


Figure 3: WHO 2011 map of countries where dengue has been reported.

fever. Part of the treatment plan should include counselling on nutrition and liquid supplemental diets to help improve outcome and mitigate or even reverse any weight loss that may have occurred secondary to anorexia. Sometimes it is

medical outpatients. *Am J Med* 1998;104:56-63

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