Seychelles Dengue Outbreak

10th June 2016

Context

Since January 2016 up to 10th of June 2016, 388 people have tested positive for Dengue.

There has been an exponential increase in the number of cases of Dengue from week 16 onwards with the highest weekly confirmed cases recorded being 71 for week 19.

This trend is a gross underestimation of the real situation on the ground which is much worse since people can still have the milder form of the disease and not seeking medical attention, they are infectious and therefore continues to fuel this epidemic. There is still over 100 samples backlog to be tested therefore the epidemic curve might change and the reduction in cases seen from week 20 is most probably not accurate.

One hundred and sixty-six females and 222 males tested positive for Dengue, age ranging from 2 to 81 years old with the less than 40 years old (332 cases) representing 86% of the cases, being the most affected.
Of the 388 confirmed case, 384 were autochthonous cases having acquired the infection locally and 4 imported cases, all foreigners with no epidemiological link with the current epidemic. Three hundred and seventy-one cases were confirmed by PCR and 17 cases by serology. Subtyping was done on 48 case of which 30 subtype 1 (DEN-1) and 18 cases were subtype 2 (DEN-2).

The cases are distributed all over Mahe with two reported cases on Praslin. The Eastern region reported 27% of the cases, followed by Northern region 26%, Central region 20%, Southern region 19%, Western region 6% and Inner Island 2%. Most affected districts were English River 42 cases, Anse Royale 40 cases, Beau Vallon 36 cases, Anse Etoile 30 cases and Cascade 28 cases each.

Amongst the 388 confirmed cases, 63 were admitted at Seychelles Hospital. Complications such as gingival bleeding and haematuria have been reported. Unfortunately to date, one possible fatality reported, a dengue-leptospirosis co-infection awaiting further confirmation from overseas lab.

Possible explanation of this observation since there were two epidemics in Seychelles from December 1976 to April 1977 and from December 1978 to January 1979. Results of neutralization tests indicated that prevalence rates for the four dengue viruses were between 81% and 91.8% and that DEN-2 was the most probable etiological agent in the epidemics. It was estimated that the first, in 1976-77, affected approximately 80% of the inhabitants; the second, in 1978-79, involved the remaining susceptible population and thus explains the possible herd immunity in the population age 40 years and above. Therefore, a possible reason why the less than 40 years old are the most affected being the naïve population amongst other possible causes.

In Seychelles with the high incidence of Leptospirosis, now with Dengue in circulation and the perfect climatic conditions for both pathologies, patients presenting with Dengue like illness having high fever, muscular pain, headache or rash can be a challenging clinical diagnosis for the treating physicians. These overlapping clinical features of Leptospirosis and Dengue and even the lab findings including leucopenia, thrombocytopenia, and elevated aminotransferases are seen in both the conditions.

Due to the strong similarity in clinical presentation and epidemiology between Dengue and Leptospirosis and reported occurrence of the dual infections, it is advisable in patients presenting with acute febrile illness consistent with the Dengue like illness to be evaluated for both Dengue and Leptospirosis.

This approach will reduce the morbidity and mortality in such cases by ruling out possible Dengue and Leptospirosis co-infection which unfortunately can be fatal if not managed accordingly.

Data Source: Disease Surveillance and Response Unit (DSRU), Epidemiology and Statistics Section 2016