Tailing a virus

Posted at: 28/02/2019

The Zika outbreak response should not end when an outbreak ends

- It is a time of peace and quiet for India on the Zika front.
- Madhya Pradesh and Rajasthan, which saw large outbreaks late last year, stopped seeing new cases before the year end.
- For health authorities, the temptation may be to consider the threat past, and move on to more pressing concerns, like the large number of H1N1 influenza cases this year.
- The truth, however, is that this is an excellent time to study Zika epidemiology in India.
- Public health officials must do this while disseminating data quickly and transparently, so that it can be analysed by the global scientific community.

All strains can hurt

- First, they must leave no stone unturned in following up on every pregnant woman who was diagnosed Zika positive in Rajasthan and Madhya Pradesh.
- When the epidemics began, there were worrying indications that Central and State health officials were downplaying the risk to pregnant women.
- Prior to this, numerous outbreaks had occurred in Southeast Asia.
- Yet, no one picked up on this phenomenon.
- Scientists have proposed several explanations for this mystery.
- One is that Zika has always caused microcephaly, although the link became obvious only in Brazil because so many people were infected.
- Another possibility is that poverty and malnutrition worsen the progression of the disease in pregnant women.
- Scientists are also probing whether simultaneous infection with dengue or chikungunya make the children of Zika-infected women more prone to foetal anomalies.
- Given this conflicting evidence, scientists are very far from understanding what makes Zika deadly to foetuses.

- This means that any data on how the pregnancies of Zika-infected women pan out in India can be enlightening.
- Careful studies must be carried out to see if there is increased prevalence of microcephaly, and to understand the risk-factors.

Herd immunity

- The other important bit of actionable information that health authorities can and should gather concerns population immunity.
- To study immunity, authorities must conduct seroprevalence surveys, in which they screen people in several States for antibodies to zika.
- Many Indians could well have such antibodies, which means they are protected to some extent.
- So, seroprevalence surveys are needed to identify pockets of low immunity in India.
- Health authorities can then focus their efforts on these regions, because they would be most vulnerable to future outbreaks.
- It is true that seroprevalence studies are not easy to do, given the cross-reactivity that plagues flaviviruses.
- The Enzyme-linked immunosorbent Assay (ELISA), which is commonly used in seroprevalence studies to detect antibodies, can throw up false positives for Zika if a person has dengue antibodies.
- This is because dengue antibodies can neutralise Zika and vice versa.

Separating dengue from Zika

- The good news is that researchers are working to develop alternative tests that are specific to Zika alone.
- The outbreaks in Rajasthan and Madhya Pradesh have seemingly ended, which is good news.
- But given that the virus is already in these States, and these States have well connected transportation links, there is reason to expect future outbreaks when the mosquito season begins again.
- Outbreak response should not end when an outbreak ends, because that is when efforts to contain the next epidemic begin.

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