Role of Biomarkers in Dengue

Why in news?

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Mumbai based study on dengue found that biomarkers can help to curb deaths caused by the disease.

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What are biomarkers and how it is used?

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- Biomarkers are indicators that help in determining the presence or severity of a disease.
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- The idea is to establish molecular signatures for complicated cases.
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- It is used to have a sound knowledge of the disease progression in different individuals suffering from the disease.
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What are the characteristics of Dengue?

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- It is spread through the bite of an infected female Aedes Aegyptus mosquito.
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- Dengue Haemorrhagic Fever (DHF) can lead to lethal complications.
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- DHF in its severe form causes Dengue Shock Syndrome (DSS.
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- DSS is associated with very high mortality rate as the blood pressure drops down drastically and organs start to collapse.
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What is the status of dengue in India?

- The first evidence of occurrence of dengue in India was reported in 1956 from Vellore district in Tamil Nadu.
- A disease that was known for its presence only in urban areas gradually spread across the country.
- According to the National Vector Borne Disease Control Programme (NVBDCP) In 2016, the number of cases were 1,29,166 and 245 deaths.

What are the outcomes of the study?

- The study collected about 100 to 150 samples of which half will be of dengue patients who required ICU admission.

- Not all dengue cases develop in DHF or DSS.
- The study aims to identify a panel of protein biomarkers that can find the answers and help in prediction of severity of the disease.
- The aim is to eventually develop a diagnostic kit to avoid severe disease progression.
- If a predictive test comes in place, it will be a game changer.
- Knowing well in advance how a disease will progress will bring down unnecessary hospitalisations.

Source: The Hindu

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