



## A STUDY OF FEVER CASES IN URBAN SLUM AREAS IN AND AROUND VIJAYAWADA

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### Abstract

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The agents of human febrile illness can vary by region and country suggesting that diagnosis, treatment, and control programs need to be based on a methodical evaluation of area-specific etiologies. This study evaluates etiological agents of fever cases in urban slum areas of Vijayawada municipality by doing the tests for all commonly fever causing agents like plasmodium species(malaria), salmonella species(typhoid), Dengue virus(dengue fever), chikungunya virus, and HIV, collected blood samples are tested for above agents by doing peripheral smear examination, widal tests, dengue mac ELISA, immunochromatographic tests, rapid ELISA methods respectively, out these tests 65% for malaria,15% for typhoid,20% for dengue are came as positive . In conclusion all fevers are not dengue fevers and no need of vigorous management like higher antibiotics and platelet transfusions unnecessarily.

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Limited resources and the great diversity of acute febrile illness (AFI) etiologies in tropical regions challenge diagnosis, treatment, and public health responses to endemic and epidemic diseases.<sup>1</sup> Further confounding this is the fact that a majority of the patients present with non-descript symptoms (e.g., low-grade fever, general malaise, headache, and muscle ache) and usually no focal point of infection. Health care providers lacking proper diagnostic tools are usually unable to determine specific etiologies, often diagnosing patients presumptively based on clinical features and assumptions regarding circulating pathogens.<sup>2</sup>

Acute febrile illness occurs as epidemic in Indian sub-continent, in view of mortality, morbidity screening is need to carry out and empirical treatment with antibiotics, platelet replacement are needed only after confirmation of diagnosis of dengue like hemorrhagic fevers and antibiotics after confirmation bacterial infections.<sup>3</sup> Blood samples of fever cases of urban slum areas of Vijayawada are collected and tested for plasmodium species by peripheral smear examination for malaria fever, widal tests for salmonella for typhoid fever, mac IgM ELISA for dengue fevers, immunochromatographic tests for chikungunya fevers, rapid ELISA for HIV during epidemic outbreak of fever cases.

Blood smear is prepared and stained by Giemsa stain and interpretation by microscopy for the diagnosis of malaria. All commercial enzyme-linked immunosorbent assays (ELISA) test assays were performed and interpreted according to the manufacturer's instruction as Positive, Equivocal, and Negative.<sup>4</sup> Dengue IgM serological assays were performed on all acute serum samples from all study participants using the Dengue IgM Capture ELISA. The IgG serology was performed for chikungunya, on all serum samples. All commercial ELISA test assays were performed and interpreted according to the manufacturer's instruction as Positive, Equivocal, and Negative. Convalescent specimens that were found to be IgG positive were paired with the acute serum and retested. A 4-fold increase in titer from acute to convalescent sample, or a result change going from negative to positive, was considered indicative of seroconversions.<sup>5</sup>

A total of 30 cases are identified as acute febrile illness during epidemic outbreak in period of 15 days in urban slum areas of Vijayawada (A.P) out of these cases 20 cases are positive for malaria, in this plasmodium falciparum-7, plasmodiumvivax-6, both P.V&P.F -7, typhoid positive

by widal tests are 4, dengue positives are 6, and chikungunya, HIV positive are nil. By observation out of 30 cases 20(65%) are positive for malaria, 4 cases (15%) are positive for typhoid, 6 cases (20%) are positive for dengue fevers, nil cases for chikungunya, HIV. Since plasmodium species (malaria) is predominant etiological agent in present study of acute febrile illness in urban slum areas it is better to give anti-malarial drugs empirically instead of giving higher antibiotics for suspecting bacterial cause and transfusing platelets for suspecting dengue hemorrhagic fevers without confirmation which may leads to reemerging infections with antibiotic resistance.

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