

Dengue fever in nowshera, role of non-structural protein-1 (ns-1) positivity in dengue cases: An experience from a Qazi Hussain Ahmed medical complex nowshera- Hamzullah khan- Nowshera Medical College

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Abstract

Objective: This study was conducted to determine the frequency and characteristics of dengue patients presenting to Qazi Hussain Ahmed Medical Complex Nowshera. Dengue infection (DENV) disease is the most widely recognized mosquito-transmitted viral contamination. DENV contamination can cause gentle dengue fever or extreme dengue hemorrhagic fever (DHF)/dengue shock condition (DSS). Drain and vascular spillage are two trademark side effects of DHF/DSS. Notwithstanding, because of the restricted comprehension of dengue pathogenesis, no acceptable treatments to treat nor immunization to forestall dengue disease are accessible, and the mortality of DHF/DSS is still high. DENV nonstructural protein 1 (NS1), which can be emitted in patients' sera, has been utilized as an early symptomatic marker for dengue contamination for a long time. In any case, the parts of NS1 in dengue-induced vascular spillage were depicted as of late. In this article, the pathogenic jobs of DENV NS1 in drain and vascular spillage are audited, and the chance of utilizing NS1 as a restorative objective and antibody up-and-comer is talked about.

Material and Methods: This cross sectional observational study was conducted in Qazi Hussain Ahmed Medical Complex Nowshera from 5th July to 25th Sept 2017. A total of 72 cases were received for dengue serology. Relevant information's were collected on a pre-designed questionnaire prepared in accordance with the objectives of the study.

Dengue infection (DENV) is the most widely recognized mosquito-borne flavivirus and compromises individuals in jungle and subtropical zones. The World Health Organization assesses that more than 2.5 billion individuals addressing more than 40% of the total populace are in danger of dengue disease. Dengue infection diseases are regularly asymptomatic or cause influenza like disorder with fever and rash.

In any case, a little extent of cases form into serious disease, which is named dengue hemorrhagic fever (DHF). DHF is portrayed by vascular spillage, thrombocytopenia, and

coagulopathy. Vascular spillage brings about hemoconcentration and serous emissions, prompting circulatory breakdown, which further forms into hazardous dengue shock condition (DSS). An expected 390 million diseases happen every year around the world, and roughly 960,000 individuals with extreme dengue require hospitalization. Youngsters add to a huge extent of the serious illness cases. In 1958, DHF was accounted for to convey a case casualty rate (CFR) of 13.9% in Bangkok. Indeed, even with normalized determination and the board, the CFR stayed in the scope of 0.5-1.7% from 2000-2011 in the Philippines. Regardless of the high mortality of DHF/DSS, no encouraging viral-explicit medications or antibodies are accessible because of the restricted comprehension of the convoluted pathogenic instrument.

Results: A total of 117 patients were referred from fever clinic and emergency OPD for dengue serology. 72(61.5%) were males and 45(38.5%) were females. 24(20.5%) cases were dengue positive. 14(12%) were NS1 positive, 8(8.8%) were IGM positive and 2 (1.7%) were IGM & IGG positive. We received patient in the range of 4 years to 60 years, Mean with SD was 27 +3 years. Out of 14 NS1 positive cases 8 were males and 6 females. 2 females were IGG positive. The spectrum of dengue in correlation with gender was significantly positive with p value .026.

In two cases platelet at first visit were 58000/cmm³ that were both IGM&IGG positive. Out of 24 positive dengue cases two cases were also positive for plasmodium vivax (ring trophozoites). 6 cases were managed in hospital and discharged home with an average stay of 3 days and 4 cases referred to Lady Reading Hospital Peshawar for repeated platelet transfusion. Mortality was zero in our cases.

Conclusion: The suspicion rate of the clinician for dengue from fever clinic was 1:7. The cause of poor rate can be contributed to the patient insist for doing the dengue test before they are screened for MP and FBC etc. NS1 was positive in 6 cases that

shows that people reach the health care facility for screening well in time and patient are educated about the dengue. Females 50% positive cases were IGM and IGG positive that shows female receive the health care later than males as NS1 positivity in female gender is less than males. The spectrum of dengue in correlation with gender was significantly positive with p value .025 that shows mosquito has some affinity for specific gender, or dengue virus has it for difference in gender or the inside immunity of the both gender is involved that causes different mode of presentation and activation of antibodies.

Recommendation: Secondly high rate of false dengue infection by NS1-ICT should be discourages as low importance of NS1 protein in diagnosis and need of more sensitive test for proper diagnosis specially IgM and IgG or by ELISA or PCR-RNA techniques must be given importance before labeling a patient as Dengue positive.