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DENGUE FEVER AND MALARIA IN THROMBOCYTOPENIC PATIENTS

[1]DR. SHAZIA YASIR, [2]DR. OWAIS & [3]DR. FAISAL MOIN

[123]Department of Emergency Medicine, Ziauddin University Hospital, North Campus, Karachi

ABSTRACT

Introduction: *Both dengue fever and intestinal sickness can give thrombocytopenia. Thrombocytopenia is a steady finding in dengue fever and is viewed as a solid indicator of dengue fever. Thrombocytopenia is additionally thought about standard of sickness seriousness, awful prognostic factor and its quality is related with increment likelihood of intestinal sickness*

Targets: *To decide recurrence of conjunction of dengue fever and intestinal sickness in thrombocytopenic patients gave intense febrile ailment in tertiary care healing center*

Study Configuration: *Cross-sectional, observational investigation.*

Place and Length of Study: *Division of Crisis Pharmaceutical, Ziauddin College Clinic, Karachi from Ten months from April 2013 to January 2014.*

Approach: *An aggregate of 159 patients meeting incorporation criteria were incorporated into this examination. 5ml of blood by venupuncture in EDTA hostile to coagulant for platelet tally and getting ready thick and thin movies and 2 ml of blood in plain jug for discovery of dengue particular IgM was gathered from all patients. Thick movies are utilized to recognize malarial parasites and thin movies to distinguish specie. Dengue fever was analyzed on positive dengue IgM. Concurrence was named as positive if malarial parasites and dengue IgM observed to be available in the meantime. This dispersion weakness test was use to decide helplessness of bacterial operators to anti-microbials. Information was broke down by graphic measurements utilizing SPSS programming adaptation 19.*

Result: *General mean (±SD) age was 38.3 (±7.9) years, with Male to female proportion was 1.1: 1. Co-diseases (Dengue and Intestinal sickness) were analyzed in 5 (5.6%) of cases. From 5 cases, 3 (60%) were male and 2 (40%) were female. Mean (±SD) age of 5 positive instances of co-contamination was 37.8 (±8.3) years.*

Conclusion: *Simultaneous diseases were discovered 5.6% in this investigation. Despite the fact that this rate is somewhat low; uncommon consideration ought to be given to the likelihood of co-disease with jungle fever and dengue.*

KEY WORDS: *Dengue fever, Malaria, Immunoglobulin-M (IgM), febrile illness, Thrombocytopenia*

INTRODUCTION

Dengue Infection is turning into an expanding medical issue. More than 99% instances of viral hemorrhagic fever revealed worldwide are because of dengue hemorrhagic fever (DHF). [1] Dengue fever is cause by dengue infections (DENVs) which are individuals from Flaviviridae family. [2] It has been evaluated that 2.5 billion individuals live in zones which are in danger of pandemic transmission and more than 50 million of DENV contaminations happen all around every year. Since we are living in area where intestinal sickness is endemic and is considered as the most widely recognized reason for fever and when all is said in done practice exact hostile to malarial treatment is normal, it is essential to recognize the two conditions because of clinical similitudes and startling advancement of dengue fever (DF) to DHF and dengue stun disorder (DSS).

Both dengue fever and intestinal sickness can give thrombocytopenia. Thrombocytopenia is a steady finding in dengue fever and is viewed as a solid indicator of dengue fever. Thrombocytopenia is likewise thought about basis of illness seriousness, awful prognostic factor and its essence is related with increment likelihood of intestinal sickness

In a neighbourhood consider Ali et.al demonstrated that Out of 11 patients analyzed as having dengue fever on serology 9 (81.8%) likewise had conjunction of intestinal sickness and thrombocytopenia was available in 90% of such patients. [5] Out of 11 DENV positive patients three patients passed on and first DENV positive patients who kicked the bucket was endorsed hostile to malarial by general specialist in open air. On examination plasmodium falciparum rings were found in blood and DENV IgM was recognized in serum tests

Because of clinical likenesses in two conditions and probability of broad mosquito presentation, high conjunction of the two conditions can't be avoided. This examination means to decide recurrence of coinciding dengue fever and intestinal sickness in thrombocytopenic patients giving intense febrile ailment with the goal that extent of the condition could be surveyed. The discoveries could be utilized to arrange for that all patients with intense febrile disease with thrombocytopenia must be screened for dengue fever without delay.

METHODOLOGY

This investigation was completed at the bureau of crisis medication, Ziauddin College Healing center, Karachi, Pakistan. Patients of either sexual orientation with over 12 years old displaying to Ziauddin Doctor's facility Karachi with intense febrile sickness and found to have thrombocytopenia were incorporated into the investigation while patients known to have ailment causing thrombocytopenia e.g. foundational lupus erythematous, idiopathic thrombocytopenic purpura and patients with different reasons for intense febrile sickness, for example, pneumonia, meningitis, enteric fever and so on analyzed on blood culture, chest X-beam sputum C/S, pee D/R were rejected from the examination.

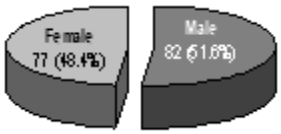
An aggregate of 159 patient's satisfying consideration criteria were incorporated into the examination. 5ml of blood by venupuncture in EDTA hostile to coagulant for platelet tally and getting ready thick and thin movies and 2 ml of blood in plain jug for identification of dengue particular IgM was gathered from all patients. Thick movies are utilized to recognize malarial parasites and thin movies to distinguish specie. Dengue fever was analyzed on positive dengue IgM. To limit predisposition all example was sent to single focal research facility of the healing facility. A proforma particularly intended for the investigation was utilized to archives discoveries, for

example, paients age, sexual orientation, name, intestinal sickness parasite, dengue IgM by the specialist. Concurrence was named as positive if malarial parasites and dengue IgM observed to be available in the meantime.

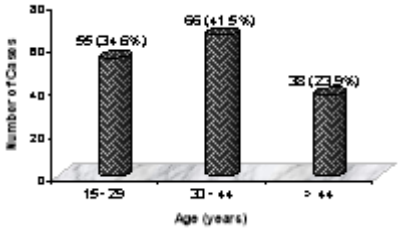
Information was entered in PC and examined by SPSS form 19.0 recurrence and rates were figured for absolute factors, for example, sexual orientation, existing together dengue fever and intestinal sickness. Mean standard deviation was figured for numerical factors like age. Stratification was done as far as age and sex to see the impact of that on result.

RESULT

During the study, a total of 159 cases with thrombocytopenia of age > 12 years were included. From 159 cases, 82 (51.6%) were male and 77 (48.4%) were female. *(Figure-1)*

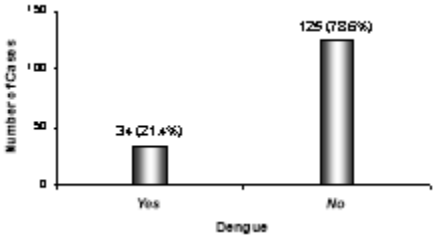


Mean (±SD) age of 159 cases was 38.3 (±7.9) years with range = 15 – 53 years. Majority 66 (41.5%) of cases had age between 30 – 44 years. *(Figure-2)*

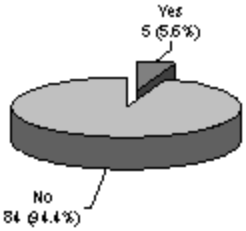


Out of 159 thrombocytopenic cases presented with acute febrile illness, malaria was diagnosed in 55 (34.6%) cases.*(Figure-3)*

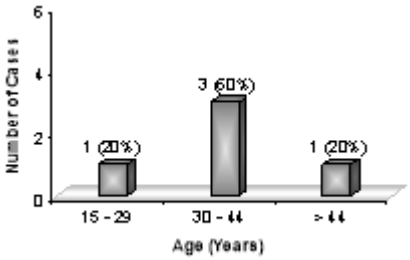
Dengue fever was diagnosed on positive dengue IgM. Out of 159 cases, 34 (21.4%) of cases were diagnosed as dengue. *(Figure-4)*



Co-infections (Dengue and Malaria) were diagnosed in 5 (5.6%) cases. *(Figure-5)*



Out of 5 positive cases of co-infection, 3 (60%) were male and 2 (40%) were female. Mean (±SD) age of 5 positive cases of co-infection was 37.8 (±8.3) years with range = 15 – 52 years. Majority 3 (60%) of cases had age between 30 – 44 years. *(Figure-6)*



DISCUSSION

Notwithstanding a wide cover amongst jungle fever and dengue endemic regions, distributed reports of co-contaminations are rare in the writing. Jungle fever and dengue must be suspected in febrile patients living in or coming back from territories endemic for these contaminations.

The affirmation of intestinal sickness is fast, and after jungle fever is affirmed, dengue is normally precluded without screening for it. Two techniques can affirm dengue: dengue-particular IgM sero-change or identification of dengue infection particles amid the intense stage (day 0 to day 4 after beginning of fever) by RT-PCR, which is quicker and more particular. In distributed case reports, the conclusion of dengue contamination is normally made in light of positive dengue IgM; notwithstanding, this can't affirm late dengue, since IgM can hold on for a considerable length of time and cross-respond with different arboviruses. On the off chance that RT-PCR requires a particular research facility and can't be performed nearby, another test, the Platelia, is currently effortlessly incorporated into any lab and is shown especially for early-intense stage tests. To research the recurrence of dengue and jungle fever co-contamination, the Platelia test ought to be utilized as a part of all instances of dengue-like or intestinal sickness like disorder, notwithstanding when intestinal sickness finding was certain, in districts where the two diseases may cover.

Both dengue fever and intestinal sickness can give thrombocytopenia. Thrombocytopenia is a steady finding in dengue fever and is viewed as a solid indicator of dengue fever. Thrombocytopenia is likewise thought about measure of infection seriousness, awful prognostic factor and its essence is related with increment likelihood of jungle fever.

Blended contaminations with numerous etiologic specialists are normal in intestinal sickness. Regardless of inadequate information, dengue and intestinal sickness coinfection ought to be basic in territories where the two

ailments are co-endemic in many spots of the world. In an investigation in regards to indicative procedures and administration of dengue and jungle fever co-contamination, all patients with double disease exhibited delayed fever for over seven days, myalgia, draining appearances, rash and sickliness. In addition, as indicated by Vasconcelos et al, the nonstop fever caused by arboviral disease can veil the occasional fever related with malarial parasites.

Out of 159 thrombocytopenic cases gave intense febrile disease, intestinal sickness was analyzed in 55 (34.6%) cases while 34 (21.4%) of cases were analyzed as dengue.

Of the 89 patients of dengue and intestinal sickness in this examination, 5.6% had simultaneous dengue and jungle fever. This rate is generally high as contrasted and other universal examinations. An investigation from France detailed that 1% simultaneous dengue and jungle fever. Another investigation from Brazil announced 1.8% simultaneous dengue and jungle fever.

High rate was found in a neighborhood consider Ali et.al demonstrated that Out of 11 patients analyzed as having dengue fever on serology 9 (81.8%) additionally had concurrence of intestinal sickness and thrombocytopenia was available in 90% of such patients.

In this investigation from 9 positive instances of co-disease, 3 (60%) were male and 2 (40%) were female. Mean (±SD) time of positive instances of co-contamination was 37.8 (±8.3) years.

Although a reduced sample number was assessed in this study, a limitation that we acknowledge, it is important to remember that dengue and malaria co-infection requires special attention because delayed diagnosis and appropriated treatment can result in fatal complications. Both diseases causes similar symptoms and simultaneous infections with two different infectious agents may result in overlapped symptoms, diagnosis of malaria and dengue based purely on clinical grounds may become difficult for physicians and it is possible that either clinical spectrum of the disease or treatment may also be affected. Finally, it is important to remember that both diseases have similar clinical findings, thus the diagnosis could be made concomitantly for dengue and malaria in patients living or returning from areas where both diseases are endemic or during dengue outbreaks.

CONCLUSION

Concurrent infections were found 5.7% in this study. Although this percentage is slightly low; special attention should be given to the possibility of co-infection with malaria and dengue. The distinction between severe dengue and severe malaria must be made in an emergency department or hospital setting because in both situations, early diagnosis is essential for patient care.

Finally, it is important to remember that both diseases have similar clinical findings, thus the diagnosis could be made concomitantly for dengue and malaria in patients living or returning from areas where both diseases are endemic or during dengue outbreaks.

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