International Journal of Medical Science and Education
pISSN- 2348 4438 | eISSN-2349- 3208
Published by Association for Scientific and Medical Education (ASME)
Int.J.Med.Sci.Educ. October-December 2021; 8(3) : 14-19
Available Online at www.ijmse.com
Original Research Article

ASSESSMEMT OF CLINICAL PROFILE OF CHIKUNGUNYA FEVER

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Received: 08/09/2021 ***Revised:17/09/2021*** ***Accepted: 17/12/2021***

ABSTRACT

Background- Chikungunya, is a vector borne disease, epidemics were reported and various studies were conducted to halt its diseases cycle and implement the vector control measures. The diseases burden is widely distributed among subtropical, tropical and monsoon zones worldwide along with cultural and socio-economic factors. Chikungunya is present as an acute illness, with fever, skin rash and incapacitating arthralgia as its salient feature.**Material & Methods**: The present prospective study was conducted at department of general medicine of our tertiary care hospital. The study duration was of one year and sample size of 50 was calculated at 95% confidence interval at 5% acceptable margin of error. All patients who were diagnosed with chikungunya were enrolled from outdoor department and from ward by simple random sampling. **Results:** In the present study, the most presenting symptom was fever and arthralgia which were present in 100% of cases which were followed by headache and body ache which was present in 98% cases, followed by nausea and vomiting in 70% cases. weakness was present among 64% patients and abdominal pain was present in 32% patients. Splenomegaly was the most common organomegaly finding, which was present in 24% patients which was followed by hepatomegaly was present in 20% patients. Among 8 patients there was both Hepato-splenomegaly present. In present study, none of patients had cardio-vascular symptoms and complications. Out of the total patients, serum urea levels were in normal limits however, serum creatinine values were higher among 8% of patients. There was no other morbidity and mortality reported in present study. **Conclusion:** We concluded from the present study that majority of patients had fever and arthralgia which were present in 100% of cases which were followed by headache and body ache which was present in 98% cases, followed by nausea and vomiting in 70% cases. weakness was present among 64% patients and abdominal pain was present in 32% patients.

Keywords: Chikungunya, Clinical feature, Epidemic.

INTRODUCTION

Since Chikungunya is transmitted by vectors, epidemics have been reported, and numerous studies have been carried out in an effort to end the disease's cycle and implement vector control measures **(1).** Along with cultural and socioeconomic factors, the burden of diseases is

widely dispersed across subtropical, tropical, and monsoon zones worldwide **(2).** Chikungunya is available as an intense sickness, with fever, skin rash and weakening arthralgia as striking component recognizes it from other vector borne fever like Dengue **(3).** The disease itself is rarely fatal. Epidemics of chikungunya shows pattern of abrupt and massive outbreaks with a high attack rate followed by slow decline of cases. The most commonly associated vector is aedes mosquito which is responsible for the Chikungunya and its complications which all are termed as medical emergencies **(4).**

Majority of epidemics were associated with moderate morbidity and low mortality because the regions where the disease has its high prevalence and incidence there is the access of good and quality of medical care is available **(5).** The clinical onset of Chikungunya is acute illness with high fever, headache, myalgia, back pain and arthralgia. Chikungunya, has a short incubation period of 2–4 days. The symptoms usually subside within 7–10 days, however joint stiffness and pain is remained there as a chronic symptom. Fever and arthralgia generally reported in all patients with Chikungunya in the epidemics **(6)**. Chronic, relapsing and persistent arthralgia is the hallmark sign of Chikungunya, affecting the small joints of extremities mainly but targeting the large joints also as well **(7).** However, these joints appear normal in radiological examination. The biological markers of inflammation are also found to be either normal or moderately elevated of the affected joint. There are a few previous hospital based studies of Chikungunya virus-associated joint disorders available, and the underlying mechanism is also unknown **(8)**. Hence, we conducted present study to assess the clinical profile of Chikungunya and its disease burden among patients attending our tertiary care centre.

MATERIALS & METHODS

The present prospective study was conducted at department of general medicine of our tertiary care hospital. The study duration was of one year from August 2018 to July 2019. A sample size of 50 was calculated at 95% confidence interval at 5% acceptable margin of error by epi info software version 7.2. All patients who were diagnosed with chikungunya were enrolled from outdoor department and from ward by simple random sampling. Institutional Ethics Committee Clearance was obtained before start of study and written and informed consent for the procedure was obtained from all the patients. Strict confidentiality was maintained with patient identity and data and not revealed, at any point of time.

The data were collected by detailed history, general physical and clinical examination from each patient (above 12 years of age) after taking the written consent. Danger signs and symptoms were assessed such as dehydration, altered sensorium, icterus, convulsion and examination was done for hepatomegaly and splenomegaly. The hematological investigation were done along with complete blood count and erythrocyte sedimentation rate. Data were entered in the MS office 2010 spread sheet and Epi Info v7. Data analysis was carried out using SPSS v22. Qualitative data was expressed as percentage (%) and Pearson's chi square test was used to find out statistical differences between the study groups and sensitivity, specificity, positive predictive value and negative predictive value were calculated. If the expected cell count was < 5 in more than 20% of the cells then Fisher's exact test was used. All tests were done at alpha (level significance) of 5%; means a significant association present if p value was less than 0.05 and highly significant if p value less than 0.01.

RESULTS

In the present study we enrolled 50 patients who were diagnosed with chikungunya fever were enrolled from outdoor department and from ward by simple random sampling. The study participants were aged from 19 to 48 years. The mean age of the enrolled participants was 31.46 ± 6.73 years. There was no patient in the present study who aged less than 18 years of age. Out of total patients diagnosed with chikungunya fever 58% were male and 42% were females. Majority of cases in the present study were diagnosed with chikungunya fever 68% cases were from rural areas and 32% patients from urban areas. On the assessment of fever, it was found that 86% cases had high grade fever, rigors were present in 26% cases and fever was intermittent in 96% cases. (Table-1)

Table No.-1: distribution according to type of species and pattern of fever

Fever		No.of patients
Residential area type	Rural	68%
	Urban	32%
Fever Grade	High	86%
	Low	14%
Rigors	Present	26%
	Absent	74%
Fever Type	Intermittent	96%
	Continuous	4%

In the present study, the most presenting symptom was fever and arthralgia which were present in 100% of cases which were followed by headache and body ache which was present in 98% cases, followed by nausea and vomiting in 70% cases. weakness was present among 64% patients and abdominal pain was present in 32% patients.

Table No.-2: distribution of study participants according to presenting symptoms

Presenting Symptoms	No. of patients (%)
Fever	100%
Arthralgia	100%
Headache and Body ache	98%
Nausea & vomiting	70%
Weakness	64%
Abdominal Pain	32%

Table No.-3: distribution according to morbidity in the patients

Findings	No. of patients
Splenomegaly	24%
Hepatomegaly	20%
Hepatosplenomegaly	8%
Hyperbilirubinemia	72%
icterus	4%
thrombocytopenia	50%
Raised serum creatinine	8%

In the present study, splenomegaly was the most common organomegaly finding, which was present in 24% patients which was followed by

hepatomegaly was present in 20% patients. Among 8 patients there was both Hepato-splenomegaly present. Among rest of cases there was no organomegaly was found by the palpation method. Out of the total patients, 72% patients had hyperbilirubinemia. Out of them 6% patients had serum bilirubin levels of more than >3 gm% and icterus was present in these 4% patients. Out of the total patients, 50% had thrombocytopenia. In present study, none of patients had cardio-vascular symptoms and complications. Out of the total patients, serum urea levels were in normal limits however, serum creatinine values were higher among 8% of patients. There was no other morbidity and mortality reported in present study.

DISCUSSION

In the present study we enrolled 50 patients who were diagnosed with chikungunya fever were enrolled from outdoor department and from ward by simple random sampling. The study participants were aged from 19 to 48 years. The mean age of the enrolled participants was 31.46 ± 6.73 years. There was no patient in the present study who aged less than 18 years of age. Out of total patients diagnosed with chikungunya fever 58% were male and 42% were females. Majority of cases in the present study were diagnosed with chikungunya fever 68% cases were from rural areas and 32% patients from urban areas. On the assessment of fever, it was found that 86% cases had high grade fever, rigors were present in 26% cases and fever was intermittent in 96% cases. Similar results were obtained in a study conducted by Pratima Ray et al among patients with chikungunya fever and found that nearly similar findings to the present study **(9)**. Similar results were obtained in a study conducted by Bhaswati B et al among patients with chikungunya fever and found that nearly similar findings to the present study **(10).**

In the current study, splenomegaly, which was present in 24% of patients, was the most common organomegaly, followed by hepatomegaly, which was present in 20% of patients. There were two instances of hepatosplenomegaly among eight patients. In the remaining cases, organomegaly was not found using the palpation method. Hyperbilirubinemia was present in 72% of the patients. Four of them had icterus and six percent of them had serum bilirubin levels greater than three grams per milliliter. Thrombocytopenia was present in half of the patients. There were no cardiovascular symptoms or complications in this study's patients. 8 percent of patients had elevated levels of serum creatinine, but the majority of patients had normal levels of serum urea. There was no additional mortality or morbidity reported in this study.Similar results were obtained in a study conducted by Krishna P et al among patients with chikungunya fever and found that nearly similar findings to the present study. they conducted their study in five most affect districts of kerala. They used two-stage cluster sampling technique for data collection. Ten clusters each were selected from all those five districts, and the clusters size were 18 houses each. A structured interview was conducted and recorded for data collection. Diagnosis based on signs and symptoms of chikungunya fever was the major case-finding strategy **(11)**.

The most common organomegaly finding in the current study was splenomegaly, which was present in 24% of patients, followed by hepatomegaly, which was present in 20% of patients. There were two cases of hepatosplenomegaly among eight patients. The palpation method did not reveal organomegaly in the remaining cases. Seventy-two percent of the patients had hyperbilirubinemia. Six percent of them had serum bilirubin levels greater than

three grams per milliliter, and four of them had icterus. 50 percent of the patients had thrombocytopenia. None of the patients in this study experienced cardiovascular symptoms or complications. Serum creatinine values were higher in 8% of patients, but serum urea levels were normal in the majority of patients. The current study did not report any other mortality or morbidity.

Similar results were obtained in a study conducted by Binoy P et al among patients with chikungunya fever and found that nearly similar findings to the present study. they reported arthralgia was reported in 100% of Chikungunya patients, arthritis in 78%, skin rash in 68%, and 22% had persistent symptoms **(12).**

CONCLUSION

The present study led us to the conclusion that the majority of patients had fever and arthralgia in 100% of cases, followed by body aches and headaches in 98% of cases, nausea and vomiting in 70%, and so on. Sixty-four percent of patients had weakness, and 32 percent had abdominal pain. We suggest more elaborative studies with the large number of cases to generalize the study results.

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How to cite this article: Beniwal S. Assessmemt of clinical profile of chikungunya fever. Int.J.Med.Sci.Educ 2021; 8(3):14-19