

## Review Article

# Current Scenario on Viral Diseases: Prospective Study on Prevalence, Prevention and Quality of life of Patients in a Rural Community

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## ABSTRACT

The objective of the study was to identify the prevalence and risk of viral disease and to make aware the community about the prevention, control measures and management of viral disease to improve the quality of life of the patient by using Patient information leaflets. The study was planned to conduct for a period of five months in a rural community, at Pathanamthitta, Kerala. A specially designed data entry format was used to note the details of the patient. A total of 184 cases were screened, the prevalence of viral diseases was more in male(66.30%) than female (33.69 %), prevalence of disease more in age between 0-10yrs, in the season of July-August (53.26%), viral fever was found to be more, especially respiratory viral diseases, with more hospitalization cases. The improved standards of education and integrated hygiene could have a significant impact in reducing infectious disease within community and home environmental. Prevention of viral infections progression could result in substantial economic benefits to the whole society with high prevalence of disease among other viral infections alarming hence more attention should be paid to vaccination.

**Keywords:** Viral disease, Prevalence, Prevention, patient information leaflet.

## INTRODUCTION

Viruses are probably the most common cause of infectious disease acquired within indoor environments and have considerable impact on human health ranging from severe life threatening illnesses to relatively mild and self limiting or asymptomatic diseases. In particular viruses causing gastrointestinal and respiratory diseases spread rapidly in the community and cause considerable morbidity. Viruses are spread easily through closed environments such as the home, schools, workplaces, transport systems etc. At risk groups include not only the immunocompromised but also the elderly neonates, pregnant women, hospital patients discharged in to the community, individuals using immunosuppressive drugs and also those using invasive systems or inhalation systems or devices.

## MATERIALS AND METHODS

### Study design and patients

The study was planned to conduct in a community, Kanjeettukara panchayath, Ranni Taluk in Pathanamthitta district which is a rural

community with more than 3500 population. A pilot study was carried out for a period of one week in the community to find the scope of the study in the selected area. It was found that many of viral diseases were identified with or without proper treatment. The study was planned to carry out for a period of five months from May 2013 to September 2013. The prevalence of viral diseases will be more in this period. Almost all categories of viral diseases with age group of 0 – 60 yrs were included in the study. Geriatric cases were excluded from the study.

### Data collection and analysis

A specially designed data entry format was used to note the details of patients including sex, age, diseases, Drugs practiced, dosage, hygienic status, economic status, Educational status etc. The collected data were analyzed for its appropriateness and suitability. The interpretation was made for collected data.

## RESULTS AND DISCUSSION

A total of 184 cases were screened, the prevalence of viral diseases was more in male

66.30% (n=122) than female 33.69 % (n=62) in the taken rural community (FIGURE 1). The result of age categorization revealed that patients of age between 0-10yrs experienced maximum cases 13.04 % (n=24) of male and 10.32 % (n=16) female. The data on age and sex categorization was compared with the clinico - epidemiological profile of dengue fever by Abrol<sup>4</sup> (FIGURE-2). The report on hygienic status revealed that a medium of hygienic conditions with 50% (n=92) in rural community were noticed. The proper sanitization and hygienic conditions are one of the main factors for prevention of viral diseases. This data compared with Spread and prevention of some common viral infections in community facilities and domestic homes by D.Steven<sup>1</sup> (FIGURE-3). The data on seasonal risk for viral diseases revealed that the incidence of diseases were reported more in July-Aug, 53.26% (n= 98) in male and 52.71% (n=52) in female than other months. Changing seasonal climate is a risk factor for the incidence of viral diseases especially in spring season .This data compared with the viral infections, prevalence and costs: A 5yrs hospital based retrospective observational study in Shiraz, Iran by Behnam Sabayan<sup>5</sup> (FIGURE-4). Educational level of the studied population was recored that 41.84% (n=77) were with formal schooling, 35.32 % (n=65) with pre schooling, 12.5% (n=23) with graduation and 10.32 % (n= 19) were under illiterate or just literate .The data compared with retrospective community study of endemic viral hepatitis in a urban area by J Singh<sup>2</sup> ( FIGURE 5). Education status of the community is one of the major factors which helps to prevent the risk and prevalence of viral infections , especially in vaccination, hygienic status and compliance of medication .

The data on type of infections revealed that incidence of diseases were reported more in case of viral fever 27.17%(n=46) than chicken guinea 17.39%(n=31), dengue fever 16.30%(n=27). This data on type of infection was compared with the viral infections, prevalence and costs: A 5-yr, hospital based, retrospective observational study in Shirz, Iran by B Sabayan<sup>5</sup> (FIGURE -6). The prevalence of diseases will be more during monsoon and the change of season also will be a risk for the incidence of diseases which spread through polluted air, contaminated water and food, mosquito. The report on categorization of viral infections showed that respiratory tract infections 46.73% (n=86) found to be the most frequent infection followed by gastrointestinal viral infections 8.15% ( n=15) and others 45.10% (n=83) respectively. The study data was standardized with the spread and

prevention of some common viral infections in community facilities and domestic homes by D.Stevens<sup>1</sup> (FIGURE-7). Hospitalized cases of viral infections in the studied population were found to be 47.82% (n=88) , and 52.17% (n=96 ) were non hospitalized .Though many viral infections are sub clinical and self limiting , this study confirmed that hospitalization due to viral infection is not uncommon. A hospital based retrospective study on viral infections by B Sabayan<sup>5</sup>(FIGURE-8). The result on pattern of drugs used in study population were categorized as antipyretic 64.67 % (n=119), antibiotic 50% (n=92), antiviral 13.04% (n=24), antiulcer 43.47 % (n=80). Antipyretic were used more followed by antiviral, antibiotic etc. (FIGURE 9). Vaccination report on studied cases showed that 43 cases required vaccination out of 184 cases, in which 55.81% (n=24) cases were vaccinated and 44.18 % (n=19) were non-vaccinated. This data compared with the impact of vaccines and vaccinations by Center for Infectious Diseases and Vaccinology, Arizona State University<sup>20</sup> (FIGURE-10).

## CONCLUSION

The study revealed that that the most of the Viral diseases were found in rural community with more prevalence in males with the age group between 0-10yrs. Viral fever, dengue, chicken guinea were found to be more in the study group in rural community. Hygienic and economic status and seasonal changes were found to be the risk factors for the prevalence of viral infections inappropriate medications and vaccination was also common in this population. Viral shedding may begin before the onset of symptoms and may continue for several days or even weeks after the symptoms have ceased. Virus transferred from surfaces to hands, fingers and food has been demonstrated. The improved standards of education and integrated hygiene could have a significant impact in reducing infectious disease within community and home environmental. Prevention of viral infections progression could result in substantial economic benefits to the whole society with high prevalence of disease among other viral infections alarming hence more attention should be paid to vaccination. So effective preventive measures are needed, designed to target both vulnerable groups and young people in general. It is the evident that the health care needs of the community are multifaceted. A system that ensures a comprehensive health care will have to be developed for this purpose. There are many barriers to utilization of health facilities by the

community more so by the community persons. Apart from there limited morbidity, narrowing source of information and inadequate awareness of treatability of disorders, the people are likely to have poor family support and social integrating. This information is vital for program me planners indicating that the existing control programs have been ineffective public health education, to make the people aware about preventive aspects of the disease is important. We have prepared and submitted the patient information

leaflet on identified viral disease in the community as a part of the community education to improve the quality of patients. We documented health and needs the community populations which need to be taken to account by practicing family physicians, social service workers and also policy makers of the country.

#### AKNOWLEDGMENT

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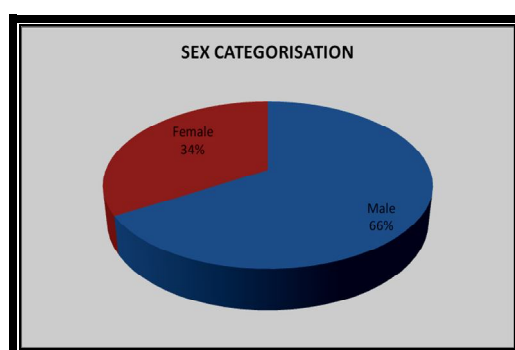


Fig. 1: Sex Categorisation (N=184)

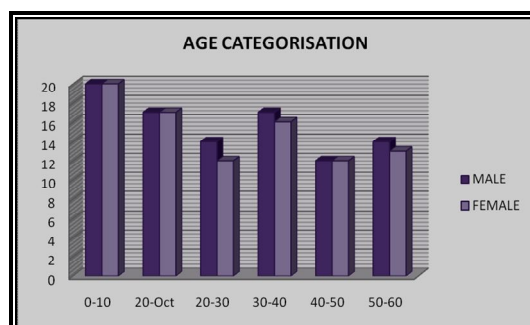


Fig. 2: AGE CATEGORISATION (N=184)

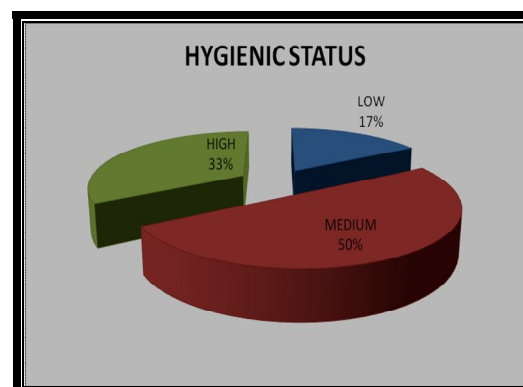


Fig. 3: HYGIENIC INTERVENTION (N=184)

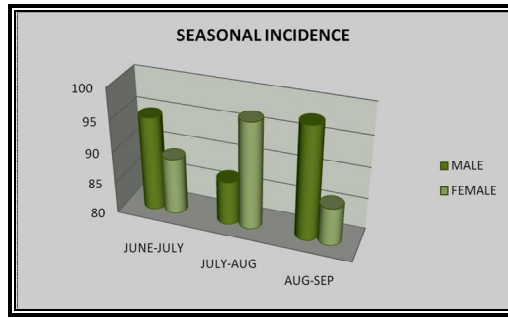


Fig. 4: SEASONAL INCIDENCE (N=184)

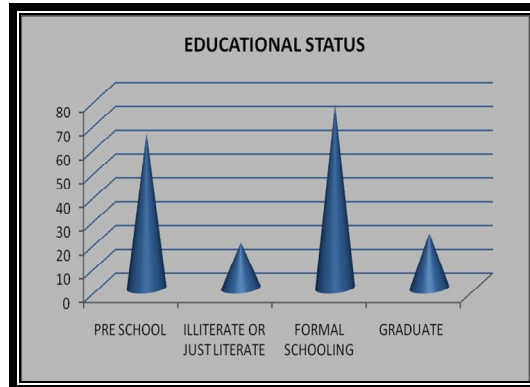


Fig. 5: EDUCATIONAL STATUS (N=184)

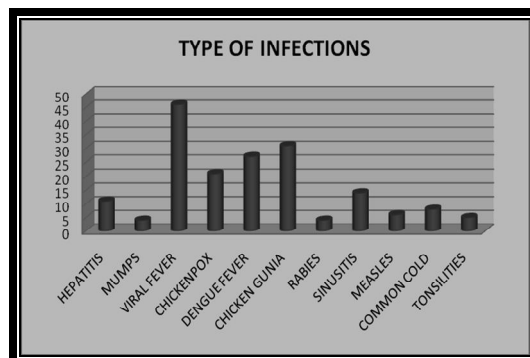


Fig. 6: TYPE OF INFECTIONS (N=184)

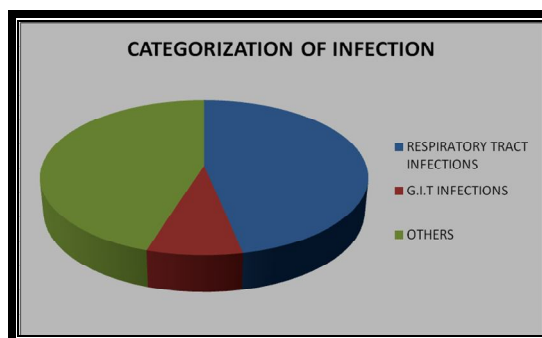


Fig. 7: CATEGORISATION OF INFECTION (N=184)

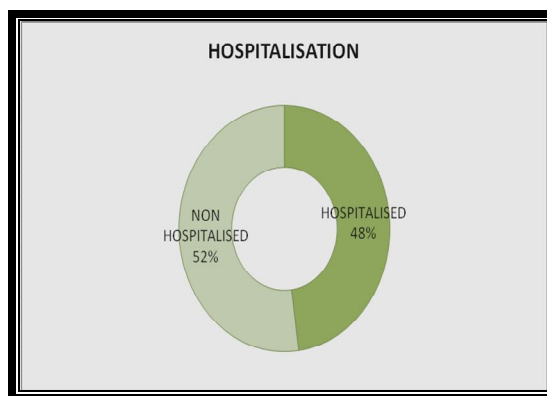


Fig. 8: HOSPITALISED CASES (N=184)

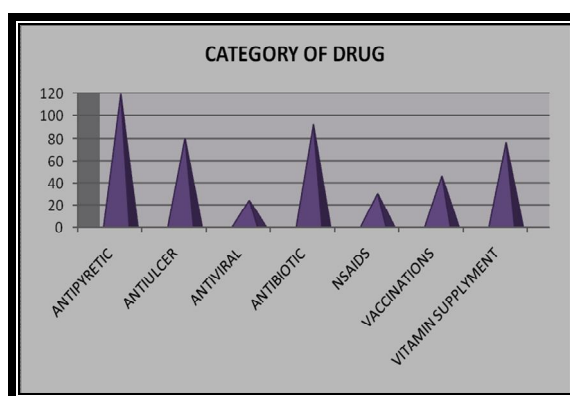


Fig. 9: DRUG CLASSIFICATION (N=184)

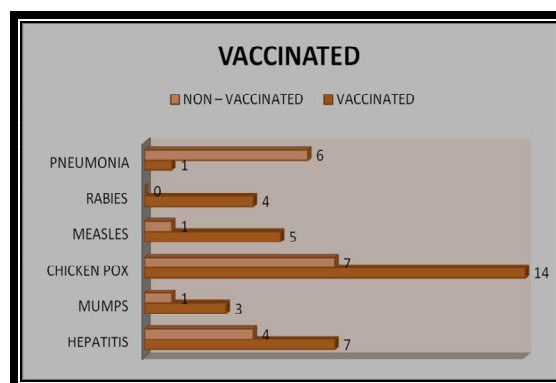


Fig. 10: VACCINATED VIRAL CASES (N=184)

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