



Prevalence of Hepatitis and its Public Health Implications in Owerri and its Environment

*Corresponding author: Iwunze J.I

* Onyekwere EO, Amaechi AA

Department of Animal and Environmental Biology, Imo State University, PMB 2000

Owerri, Nigeria

E-mail: iwunzejohn@gmail.com

Phone: 08036636672

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ABSTRACT

This study was carried out to determine the Prevalence of Hepatitis and to determine its Public Health implications in Owerri and its environment. Hospital medical record was used to determine the prevalence from the year 2009 to 2013. Out of the 935 recorded cases, 484 (51.8%) consecutive patients attending outpatient clinic were infected with hepatitis virus. Out of this number were 320 males (66.1%) and 164 were females (33.9%). The prevalence was lower (12.4%) in the year 2009. Only 60 patients attending out-patient clinic have found infected with hepatitis virus. In the year 2010, the prevalence was higher with 84 patients (17.4%). The year 2011 yielded the highest prevalence of (26.3%) of hepatitis with 130 patient having Hepatitis virus was noted. The year 2012 had a prevalence of (22.7%) and the year 2013 with a prevalence of (20.6%). In overall analysis age group 31-40 showed the highest prevalence of (22.7%), Statistical analysis indicated a significant variation between years studied and when data was rearranged in relation to sex and age ($P < 0.05$). It is recommended that Vaccine should be available as for preventive measures along with time regular medical checkup.

Keywords: Hepatitis, Prevalence, Health Implications

INTRODUCTION

Hepatitis is an inflammation of the liver characterized by the presence of inflammatory cells in the tissue of the organ. It may occur with limited or no symptoms, but often leads to jaundice, anorexia (poor appetite) and malaise. Hepatitis is acute when it lasts less than six months and chronic when it persists longer (Ryder and Beckingham, 2001). A group of viruses known as the hepatitis viruses cause most cases of hepatitis worldwide, but it can also be due to toxins (notably alcohol, certain medications and plants), other infections and autoimmune diseases (Ahmedin *et al.*, 2004). The hepatitis virus is found in the blood and other body fluids and is transmitted from person to person. The most common routes of infection include blood transfusions; blood products where there is no screening for blood-borne viruses, medical or dental interventions in countries where equipment is not adequately sterilized, mother to infant during childbirth, sexual transmission (in the case of hepatitis B), sharing equipment for injecting drugs, sharing straws, noses etc. for snorting cocaine (cocaine is particularly alkaline and corrosive), sharing razors,

toothbrushes or other household articles, tattooing and body piercing if done using unsterilized equipment (Redmond, 2007). The hepatitis B virus is spread between people through contact with the blood or other body fluids (i.e. semen, vaginal fluid and saliva) of an infected person, while the hepatitis C virus is spread through direct contact with infected blood. Very rarely it can also be passed on through other body fluids. Many people infected with hepatitis B or C rarely display any symptom, although they can still transmit the virus to others (Ahmad *et al.*, 2006). Hepatitis B is a major disease of serious global public health proportion. It is preventable with safe and effective vaccines that have been available since 1982. Of the 2 billion people who have been infected with the hepatitis B virus (HBV) globally, more than 350 million have chronic (lifelong) infections (Mohammed *et al.*, 2003). Over 20 million people are infected annually with this virus (Ahmad, 1998). Hepatitis C is a viral infection of the liver and is the most common blood-borne (direct contact with human blood) infection. The major causes of HCV infection worldwide are use of unscreened blood

transfusions, and re-use of needles and syringes that have not been adequately sterilized. The World Health Organization (WHO) estimates that about 3% of the world populations (200 million people) have so far been infected with the Hepatitis C virus (Schiff, 2002). Almost 50% of all cases become chronic carriers and are at risk of liver cirrhosis and liver cancer (WHO, 2000). This study was therefore aimed at access the prevalence of hepatitis and highlight its public health implications in Owerri and its Environ.

MATERIALS AND METHODS

STUDY AREA.

The study was conducted in Imo Public Health Laboratory Umuguma in Owerri West is a Local Government Area. Owerri West is one of the Local Government Area. It was created by the Federal Government of Nigeria in 1996, with the headquarters at Umuguma with its postal code 460. The Local Government is located at the rain forest zone about 120 kilometers North of the Atlantic Coast. The Local Government shares boundaries with Ngor Okpala Local Government Area in the South, Owerri Municipal Council in the East, Mbaitol Local Government Area in the

North, and Ohaji Egbema Local Government Area in the West. (Lat. $5^{\circ}10^1\text{N}$ - $S^{\circ}5^1\text{N}$ and long $6^{\circ}35^1\text{E}$ - $7^{\circ}28^1\text{E}$). The climate is tropical with well-marked dry season during October to March. The rainy seasons extends from April to September with a short break in August. Owerri West Local Government Area is presently made up of (18) Autonomous Communities namely; Amakohia Ubi, Avu, Emeabiam, Eziobodo, Ihiagwa, Irete, Nekede, Obinze, Oforola, Umudibia, Umuoma, Umuokpo, Ohii, Okolochi, Okuku, Umuguma, Ndegwu and Orogwe Owerri West Local Government Area, has a total population of about 250,000 people and covers an area of 15 square kilometers. Natural & Agricultural Resources Oil well in Okolochi E99 Oil processing in Irete Oil well in Emeabiam. Oil producing in Ohii Oil producing in Nekede Oil producing in Eziobodo Oil producing in Amakohia-Ubi Oil producing in Ihiagwa. Agricultural Resources - Ikoro Palm Kernel processing - palm, kernel oil, poultry, feeds - at Irete/Umuguma industrial layout. Kanu Garri processing industry-Obinze-Garri Industrial Dynamics - Obinze-Palm oil, poultry

feeds etc. Rubber processing industries, Emeabiam Latex (rubber).

DATA COLLECTION

Laboratory medical records files from year 2009 to 2013 were used to determine know the prevalence of hepatitis virus among the patients in the hospital.

STATISTICAL ANALYSIS OF DADA

Data collected and analyzed was based on Laboratory medical records. Data collected for this study was presented in tabular form and analysed using simple percentage and finally tested with Chi-square. Laboratory medical records of patients were examined year after for a period between January 2009-November 2013.

RESULTS

Table 1: showed the yearly distribution from the year 2009 to 2013. During the period of 2009 to 2013. A total of 935 patients were examined for Hepatitis. Out of this, 484 had Hepatitis showing a prevalence of (51.8%). The yearly distribution of Hepatitis showed a significant variation amongst the various years studied ($P < 0.05$). The year 2011 yielded the highest prevalence (26.8%)

followed by the year 2009 as the least (12.3%).

Table 2: showed the Age related prevalence of Hepatitis from the year 2009 to 2013. All age groups had Hepatitis infection. People of the age bracket 31 – 40 yielded the highest overall prevalence rate of (22.7%), followed by those with the age group 60 + and above (20.6%) while below 10 with the least (7.0%). The age related prevalence of hepatitis showed a significant variation amongst the various Age group. ($P < 0.05$).

Table 3: showed the overall sex related prevalence of Hepatitis from the year 2009 to 2013. Of the 520 males examined, 320 (61.5%) had Hepatitis infection giving overall prevalence of (66.1%). Also, of the 415 females examined 164(39.5%) had Hepatitis with (33.8%) as overall prevalence. Overall males had significantly higher infection of Hepatitis than Females ($P < 0.05$).

Table 4: showed the Age and Gender related prevalence of hepatitis in the study area. A total of 935 patients were examined for Hepatitis 520 Males and 415 Female, Out of this 484 had Hepatitis showing a prevalence of (51.8%). People of the Age and Gender

60 – above yielded the highest prevalence of (15.4% and 8.8%) while age group 0 – 10 had the least (4.7% and 2.2%). The age and Gender related

prevalence showed a significant variation between Age and Gender. (P<0.05).

TABLE 1: YEARLY DISTRIBUTION OF HEPATITIS IN THE STUDY AREA (2009-2013)

Year(s)	Number Examined	Number Infected	Percentage Infected	Overall prevalence
2009	150	60	40.0	12.3
2010	175	84	48.0	17.3
2011	180	130	72.2	26.8
2012	210	110	52.4	22.7
2013	220	100	45.5	20.6
Total	935	484	51.8%	51.8%

TABLE 2: AGE RELATED PREVALENCE OF HEPATITIS IN THE STUDY AREA

Age	Numbers Examined	Numbers Infected	Percentage Infected	Overall prevalence in Percentage
Below 10	60	34	56.7	7.0
11 – 20	75	53	70.7	10.9
21 – 30	125	60	48.0	12.3
31 – 40	170	110	64.7	22.7
41 – 50	165	57	34.5	11.7
51 – 60	160	70	45.2	14.4
60-above	180	100	55.6	20.6
Total	935	484	51.8	51.8

TABLE 3: SEX RELATED PREVALENCE OF HEPATITIS IN THE STUDY AREA

Sex	Number Examined	Number Infected	Percentage Infected	Overall Prevalence Percentage
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Male	520	320	61.5	66.1
Female	415	164	39.5	33.8
Total	935	484	51.8	51.8

TABLE 4: AGE GROUP AND GENDER RELATED PREVALENCE OF HEPATITIS IN THE STUDY AREA.

Age In years	Gender	Number Examined	Number Infected	Percentage Infected	Overall Prevalence in Percentage
Below 10	Male	30	23	76.6	4.7
	Female	35	11	31.4	2.2
10 – 20	Male	44	46	104.5	9.5
	Female	31	7	22.5	1.4
20 – 30	Male	84	37	44.0	7.6
	Female	41	23	56.0	4.7
30 – 40	Male	70	75	107.1	15.4
	Female	100	35	35.0	7.2
40 – 50	Male	102	42	41.1	8.6
	Female	63	15	23.8	3.0
51 - 60	Male	90	40	44.4	8.2
	Female	65	30	46.1	6.1
60-Above	Male	100	75	75.0	15.4
	Female	80	43	53.7	8.8
TOTAL		935	484	51.8	51.8

DISCUSSION

The result of this finding revealed an overall prevalence of 51.8% of Hepatitis in the study area. The prevalence 51.8% is in line with the work done by Olubuyide *et al.*, (1997) on Hepatitis B and C virus in Delta State. The prevalence of this study is low when compared to the work done by (Okocha, 2012) Nnewi South East Nigeria in a retrospective study of 1176 patients who had a prevalence of 68.2%. Also it

disagrees with the work done in Tanzania, outside Nigeria (Hawkins, 2013) in Prevalence of Hepatitis B co infection and response to antiretroviral therapy among patients in Tanzania. The reason for this could be due to the population size used for this study which is lower than those used by Okocha (2012) and Hawkins (2013). Further results from works of Adewole (2009) in a cohort of 420 patient's studies in National hospital Abuja Nigeria

recorded a prevalence of 11.5% while Diwe (2013) reported a prevalence of 2.2%. The difference when compared to the result of this study may be due to the fact that the results of this work was gotten from hospital record. Their result was done in the laboratory and the facilities used might be a contributing factor (Adewole, 2009 and Diwe, 2013). Observation on this study on the age specific prevalence (Table 2) showed that the people with age bracket 26 – 35 years recorded the highest prevalence rate of 22.7% Adewole (2009) made similar observation elsewhere. This could also be accounted for by the likely route in the younger age group . The sex related prevalence between male and female (Table 3) showed that the male were heavily infected than females which is in line with the work done by Dive (2013) who made the same observation on his work. This could be attributed to mens habit of induction in the activities that has to do with blood-to blood contacts like. Cultism which the practice tattooing or piercing of the body, Fights that has to do with unsterilized or accidentally contaminated with blood like broken bottle for self defends or pair-knife for protection.

Some men are careless about the equipments they use for shaving or barbing. Whereby if the skin is broken accidentally, the person involved might contact any of the blood borne virus like hepatitis depending if the equipments have been used by an infected person. Age and gender related prevalence (Table 4) showed that people of Gender/Age 50 and above recorded the highest prevalence rate compared with other Gender/Age bracket and with Below 1 years having the least prevalence rate of 9.5% which could be as a result of Having a job that involves contact with shared needle and intake of drugs that affect the liver. Sharing tooth brushes, razors and other personal hygiene items that have infected blood on them.

CONCLUSION

People are ignorant about the dreaded virus, a lot of people die without knowing the actual cause of their illness due to lack of medical check up thereby dieing silently and transferring infective virus within and around the environment through several body contacts like sneezing, fluids and sexual transmission. With the help of this study, daily medical check up will enable the

carrier to find out in time the existence of the virus in his or her body system. Therefore the need to avoid self medication is seriously advocated for as a means of prolonging people's life in the society.

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