

Analyzing the Socio-economic Factors Causing Hepatitis B and C in Balochistan:

A Case Study of Quetta District

By

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Abstract:

Hepatitis (HBV) and (HCV) are viruses of liver infections. It transpire without symptoms but can prime to jaundice a yellow discoloration of the skin, mucous membranes and conjunctiva of the eyes, poor appetite and tiredness and it might reason acute or as a chronic infection. This study analyzed the socioeconomic factors which seemingly caused hepatitis B, C in Quetta Balochistan. Out of 300 patients registered in Bolan Medical College and Civil hospital were interviewed and primary data were collected by questionnaire and statistical tools. Findings showed that main causes which were caused of hepatitis (HBV) and (HCV) of people they used personal razors of infected patients, common nail caliper of other people, root canal treatment (RCT) got blood unsafe blood transfusion, unsafe surgery, used tooth brush of other people at home, ate fruits without washing, used unsafe injection, injected drugs were the main caused hepatitis.

Keywords: Hepatitis (HBV) and (HCV), causes, impacts, Quetta, Balochistan

Introduction:

Hepatitis is an infection of the liver described by the presence of inflammatory cells in the skin of the organ (Encyclopedia, June 2017). In developing countries the available of hepatitis (HBV) and (HCV) vaccination the more livelihoods are safe and protected with extra vaccines which have been developed in European countries such as United Nations to control B and C through vaccination and enhanced human development to this killer disease(World health organization 2013). The control of hepatitis B and C to provide vaccines more than 50 percent of world's population to be vaccinated on Vaccine Security Strategy (VSS) to make safe and fully control to this dangerous disease to safe people social life (UNICEF 2009).

According to a research the prevalence of hepatitis (HBV) and (HCV) viruses are the major causes of liver diseases in the worldwide

approximately over 2 billion people are infected of hepatitis B and C, because of unawareness, injected drugs, barbers shaving, blood donors, whereas almost found socio economically poor condition and could not afforded for treatment (Daw, 2014). The most developed countries like America, North Europe and Australia the socio economic burden of B and C are more less than 2 percent whereas the under developing countries such as Asia, sub Saharan Africa the high prevalence of B and C more than 8% due to less vaccination and treatment to make control on strategic policies and prevention (Locarnini, 2015).

According to World Health Organization (WHO, 2013) the World Health Assembly (WHA) with member states identified the prevalence of hepatitis HBV and HCV both are the global public health problem. it is the policy of World Health Assembly (WHA) in worldwide with comprehensive approach to prevent and control to provide such kinds of facilities about hepatitis B,C virus, it is need for urgent action whereas the World Health Assembly (WHA) with member states include the policy of hepatitis B,C should be reaching every child with immunization programs that include hepatitis B,C vaccines, protecting against mother to child transmission of virus and ensuring the safety of blood, transfusion services, organ donation, injecting drugs, improvement of housing, sanitation, food and water safety, hospitals facilities are important for universal access to immunization, screening, diagnosis and anti-viral B,C is the policy included of World Health Assembly (WHA) to control and prevent of hepatitis B,C viral infection worldwide.

The B,C viral infection is the responsible globally leading cause of death and morbidity, whereas hepatitis B,C drugs therapy has depended on Interferon alfa-2b (Intron A) injection but the treatment in developed countries like United nation, North America, UK, and European countries are available approximately 86% of population are vaccinated to successfully whereas the under developing countries such as Africa, Nigeria, India, Bhutan, Nepal, Sudan are still high risk of infection because of poor policies and immunization programs, unawareness, poor socio economic conditions approximately 49% population are not vaccinated and could not afforded to the self-treatment lack of low socio economic conditions (Messina, 2015).

According to a survey approximately 33 million people are infected, the regions include Africa, Asia, Somalia about 30 % people are could not afford the treatment they are facing socio economic challenges whereas the developed countries less than 10 % respectively (Jamieson, J 2012). The South Asian countries which have been infected with a high level of hepatitis HBV and HCV to make burden of socio economic conditions the region includes India, Bangladesh,

Bhutan, Nepal and Pakistan with higher danger of infectious disease due to poverty, poor access of clean water, toilet facilities and illiteracy and quality health care condition (Zaidi, 2004).

Hepatitis HBV and HCV are currently becoming a universal issue approximately the prevalence of both diseases 2.2-3.0% worldwide 130-170 million people are infected seriously with poor socio economic settings whereas, in Africa is the highest direction of transmission to lack of poor health facilities with no vaccination program it should be delivered the health program and treatment (Lavanchy, 2009). The prevalence of hepatitis B,C in developed nations such as North America, western Europe and Australia are known to have lower prevalence because of strategic policies availability of vaccines, safe injection, screen blood safety, medical facilities to prevent and control B,C infection but unfortunately the under developing countries such as Africa, India, Bangladesh, Pakistan are high risk due to lack of vaccination programs and strategic policies, approximately hepatitis B, 5.3% and C, 6.7% in these population due to local blood donors, unsafe syringes and poor medical facilities (Hanafiah, 2013).

The under developing countries like India and Pakistan with prevalence of hepatitis B and C particularly in Pakistan with 5.3% population infected with low socio economic state while it develops to the liver cirrhosis whereas in Turkey approximately 2.2% and Zimbabwe 7.7% respectively, approximately 50% of these population could not vaccinated and do not have any self-support for their treatment and no prevention policies and control programs (Asif, 2010). In developing countries especially in Africa the socioeconomic burden of people with hepatitis B HBV and C HCV due to blood health care collection such as infected patient's blood points transmission, whereas Africa is the highest prevalence of hepatitis B and particularly C due to health care medical facilities and vaccination programs, while in Nigeria, Gabon, Cameroon it is identified 30% of population could not receive vaccines for treatment respectively (World Health Organization, 2004).

It is estimated that the socio economic challenges of hepatitis B and C in African countries where 75 percent infected people lack of unavailability of vaccination and national policies (Aband, 2009). In India different provinces about 75% people are infected of hepatitis B and C infection which are below the poverty line due to lack of poverty and no houses for living, lack of toilet facilities, unsafe injections and there are no vaccination program to Indian government control and prevent B,C infection of local population (Uolk et al, 2009).

In Central African countries it has been expected that the high prevalence of hepatitis B and C is global burden in the form of socio economic challenges such as financially poor for applying Immuno Chromatographic Test (ICT) and lack of medical health facilities with vaccination for treatment approximately due to poor socio economic condition 1.4 million death an Africa meanwhile a high cost of vaccines for the African population (World health organization, 2015). The prevalence of B and C in Nigeria approximately 75% of population are infected of hepatitis B and C, they could not afford, Immuno Chromatographic Test (ICT) meanwhile further could not afforded for diagnosis and treatment because socio economically they were very poor respectively (Olaso, 2007).

In under developing countries particularly in Bangladesh people are seriously suffering HBV and HCV due to lack of standard health, whereas it is available but due to high cost of people could not access to clinical diagnosis (Khan, 2011). According to world health organization reports the prevalence of HBV and HCV are related to socio economic causes of a patient and about 7.4 percent infected B and C viruses are due to lack of knowledge and awareness with poor social condition while a survey identified 12 million population of Pakistan is infected by HBV and HCV respectively (National survey of Pakistan 2007). The high prevalence of hepatitis B and C particularly in Pakistan due to blood donors approximately 65 percent is from replacement donors, 25% from volunteer donors and 10 percent from professional donors while 1.5 million points of blood are collected each year the major transmission of hepatitis B and particularly C is the most socio economic burden for Pakistani population are Lahore, Karachi, Peshawar 3.6 percent infected seriously due to poor and low income expenditure are not apply for treatment and vaccination (Bosan, 2010).

(Umar, 2012), reported that about 10 million Pakistani population is infected to belonged very poor family socio economically could not afford for treatment particularly both B and virus C whereas hepatitis C is the main cause of death about 10 percent are vaccinated patient of hepatitis B through government per patient estimated 350 lack and it control 7% whereas 2% rehabilitation process to the B patient while hepatitis C still there is no vaccines but it can be control by care and good health system.

According to a current reports the hepatitis B, C are very common especially in Pakistan's general population including its different cities such as Karachi, Lahore, Rawalpindi, Islamabad. Faisalabad, Multan, Abbottabad are continuously rising because of unawareness, unsafe blood transfusions, surgical treatment, dental treatment, untrained

clinicians, reuse of syringes, barbers and ear, nose piercing tools approximately infection from 3.13% to 23.83% among healthy blood donors respectively (Afzal, 2016). The prevalence of hepatitis B, C the four provinces of Pakistan are high risk approximately 30% Sind, 16% Balochistan 22% Khyber Pakhtunkhwa and 26% Punjab is the high risk of hepatitis B, C due to lack of health funds, unawareness, improper provision of vaccines in public hospitals, unsafe injections, contaminated razors at barber shop, unsystematic sanitations, unhygienic surgical equipment are considered the key modes of the infection transmission in the both four provinces (Mahmood, 2016).

The hepatitis B and C diseases are connected with poverty, it is the main cause of morbidity and mortality whereas in developing countries such as Africa, Nepal, India, Pakistan the socio economic burden of people which are seriously infected of hepatitis B, C are more than 62% they are under the poverty do not have any access for treatment respectively ([HYPERLINK "http://WWW.International"](http://WWW.International) WWW.International Innovation, 2014).

Hepatitis B,C are growing socio economic challenges for the low income they do not have any approach for treatment and diagnosis, approximately in Pakistan the prevalence rate of B,C 4.8% about 10 million people are infected whereas 12% population of Baluchistan is facing of hepatitis B, C particularly in Quetta about 9.7% people are infected with poor socio economic condition do not have any governmental support for treatment due to lack of standard medical institutions, safe blood donors, safe syringes and awareness programs (Ahmed, 2007).

Quetta is the capital of Balochistan, in its local population, such as Quetta city, kuchlak, Afghan refugees population with high prevalence of hepatitis HBV and HCV infection are significant causes of morbidity and mortality approximately the patient of HBV is 43% and HCV were found 44.7% respectively while, the main route of causes of population is due to blood donors, injecting drugs, barber shaving and Afghan refugees population also causes the transmission due to blood donors collection whereas, the Quetta's local population socio economically do not have any support from government and other NGOs to provide vaccines and treatment (Abbasi, 2011). According a survey in Quetta district the socio economic effects of hepatitis B and specially the local population of Quetta infected hepatitis C is responsible of human mortality about 20.8 percent including Baloch, Pashtun, Hazara due to lack of health awareness and medical health facilities and treatment whereas they infected seriously while their family condition are very poor could not apply for the vaccination costs and treatment respectively (Khan, 2013).

In Quetta's local population such as pashin, zhob, loralai and the main city of Quetta the socio economic effects on hepatitis B and particularly hepatitis C is a major serious health problem and a causative agent of chronic liver disease about 70 percent male age of 41-50 and 30 percent female suffered from (HCV) by Immuno Chromatographic Test (ICT) found positive meanwhile they are not for able to further treatment socio economically poor and there is not any governmental support nor NGOs, where as In African population approximately 58.3% hepatitis B infection approximately, 81.7% C infection they are attributed contaminated injection lack of poor health facilities with socio economically poor condition respectively (Kourtis, 2012).

Study Area:

Quetta district, the capital of Balochistan was selected as the study area for this study. The justification to select Quetta district was that almost all of the hospitals for the patients of B, C have been established in the Quetta, the health directorate and health care departments including policy makers and the authorities. Additionally NGOs that aim to support health related facilities are also based in the district, Quetta. In addition it is adequately populated with major ethnic groups, such as Baloch, Pashtoon, Sindi, Punjabi, and Hazara. Quetta is the purpose of selected area because the availability of hospitals, medical facilities all the people comes here for purpose of treatment and diagnosis, whereas those patients who belong from remote areas also come here for treatment. The hospitals of Quetta there are available of surgeon, physician as well as patients for collection of B, C related information. Quetta's different hospitals government as well as private which is available of vaccines and medicines all kinds of medical facilities and expert doctors active here that's why the research sample preferred population of Quetta district. To find out those socioeconomic related hepatitis B, C causes such as poverty, unavailability of vaccines, injections, medicines.

Methods of Data Collection and Analysis:

Out of 300 patients of HBV and HCV according to register admitted patients were randomly interviewed. All quantitative required data was collected through two hospitals, Bolan Medical College and Civil hospital. Additional information was also gathered through key informants such as principle of Bolan Medical College and concerned doctors serving, and civil hospital head, expert hepatitis physicians.

The key informants provided information on various aspects, for example health policies including available services and challenges faced by the hospitals and B, C patients. The quantitative data was analyzed through Statistical Package for social sciences (SPSS) using descriptive analysis such as, frequency distributions and correlations. On the other hand, secondary sources included books, research articles and website.

Sample Size and Sampling Methods:

Sample is the actual representative of the research population and which keeps approximately all characteristic of the whole population designed. For this study 100 registered hepatitis B and C patients were selected randomly to collect the data. Data collected from Bolan Medical College and Civil hospital in Quetta district, Balochistan.

Results:

Respondent's Profile:

The findings of the study revealed that there were 73% of Hepatitis B and 26 Hepatitis C in Quetta District of Balochistan. Results showed that the highest majority were infected with Hepatitis B.

The findings of the study revealed that there were 73% male and 26% were female respectively.

Table.1 respondent's gender

	Frequency	Percent
Male	73	73.0
Female	26	26.0
Total	100	100.0

Field survey, 2016

The findings of the study revealed that there were 57% illiterate, 16% primary, 12% matric, 6% intermediate, 3% were graduated respectively result showed that the majorities were seriously infected they were illiterate.

Table.2 Respondents' education level

	Frequency	Percent
Illiterate	57	57.0

Primary	16	16.0
Matric	12	12.0
Intermediate	6	6.0
Graduation	3	3.0
Total	94	94.0

Field survey, 2016

The findings of the study revealed that there 57% Baloch, 40% Pashto, 2% Hazara and 1% data showed Sindhi and Panjabi, in district Quetta

Table.3 major ethnic groups

	Frequency	Percent
Baloch	57	57.0
Pashtoon	40	40.0
Hazara	2	2.0
Sindhi and Panjabi	1	1.0
Total	100	100.0

Field survey, 2016

Overall, results showed that 74% people were infected with hepatitis B and 26% in hepatitis C, in Quetta District of Balochistan.

Table.4 Types of hepatitis patients

	Frequency	Percent
Hepatitis B	74	74.0
Hepatitis C	26	26.0
Total	100	100.0

Field survey, 2016

The factors hypothesized to have been causing hepatitis B, C were analyzed using correlation analysis.

The analysis included 11 variables: For example (X1), Marital Status(X2), Education(X3), Annual Income(X4), used nail clippers (X5), done root canal treatment (RCT) (X6) blood transfusion from blood donors (X7) done surgery (X8) other people razors used (X9) ate fruits not washed (X10) used tooth brush of someone else (X11) source of drinking water at home.

Results of the analysis showed that there is a (X1 significant correlation (-.539**) between Education and hepatitis (B and C). Findings reflected that most of hepatitis B and C patients were illiterate in Quetta District of Balochistan. In addition, people used nail clipper (.212*) and razor (.216*) of other people. Results showed that such practices significantly caused hepatitis. Similarly, there was a correlation (.452**) Tooth root canal treatment (RCT). People who did not wash fruits before eating were also affected (-.268**). On the other hand, married were more hepatitis infected compared to unmarried. The results of this study showed a significant correlation (.415**) between blood transfusion and hepatitis. The findings of the analysis reflected that people who used unsafe water for drinking purpose were likely more infected with hepatitis B and C (Table 2).

In twenty 1st century still people are unaware because of hepatitis related awareness, For instance findings of this study showed that moreover, 95% used common nail clipper, 4% used other tooth brush, 36% used personal razor of infected patients, 29% they sterilized needle to strict their body, 33% also scratched needle to their skin at home, 28% took fruits and vegetables without washing, 4% only they had the safe drinking water, their source of drinking water at home, 8% river, 8% dam, 54% tractor, 30% well, 21% they had the patients of hepatitis to their family members, 11% they used infected patients using things such as toil, soap at home and 76% migrated to other districts respectively. There were also treatment factors also responsible of hepatitis B,C patient's For example 67% they went to religious scholar purpose of treatment, 5% cut their tongue to blade, 66% used mullah's traditional medicines, 34% took

Amphipathic medicines and 65% used homeopathic medicines, 67% they consulted homeopathic doctor. Moreover, medical factors included, 90% they got blood from someone else, 36% got blood from blood donors and 18% got operation and surgery respectively.

Factors causing hepatitis (HBV) and (HCV) in Quetta, Balochistan

Variable	Description	Pearson Correlation	Significance
X 2 Marital Status	1 If yes, 0 otherwise	.621**	.000
X 3 Education	1 if educated, 0 not educated	-.539**	.000

X 4 Annual Income	Scale		.009	.927
X 5 Nail calipers	1 if used, 0 otherwise		.212 [*]	.035
X 6 Done root canal treatment (RCT) of tooth	1 if done, 0 otherwise		.452 ^{**}	.000
X 7 Blood transfusion	1 if yes, 0 otherwise		.415 ^{**}	.000
X 8 Done surgery	1 if done, 0 otherwise		-.130	.197
X 9 Other people razors used	1 if yes, 0 otherwise		.216 [*]	.031
X 10 Fruits not washed	1 if yes, 0 otherwise		.268 ^{**}	.007
X 11 Used tooth brush of someone else	1 if yes, 0 otherwise		-.073	.471
X 12 Source of drinking water at home	1 if yes, 0 otherwise		.178	-.076

Field survey, 2016

Discussions:

Studies indicated that transfusion of blood, contaminated syringes, unsafe water unhygienic food, blood donors, received blood to someone else which is not screened, surgical treatment, dental treatment, untrained clinicians, barbers and ear, nose piercing, injecting drugs, afghan refugees, unawareness, lack of health facilities, local blood donors lack of vaccination programs. There are some formal discussions in Quetta's different hospitals questioned to experts, surgeons of B, C they explained the main causes of hepatitis B, C to it would be genetically mother to children, sexual intercourse, unsafe drinking water, contaminated syringes, injecting drugs are the major causes which are responsible to cause B,C infection.

The government of Pakistan approved of health care policy regarding hepatitis B, C to control and prevent approximately PRs 2286.23 million for health care facilities those who could not afford should be treated free in all Pakistan. This policy included about hepatitis B, C to control transmission of hepatitis, provide free treatment, educate and create awareness, capacity building through orientation and training, consulate the hospitals. It is the prime responsibility to the government

of Pakistan to take a serious action against hepatitis B, C in to the all provinces to control and prevent this virus because Pakistan is the most effected country among in the world which is high rank of B, C viruses respectively. The main focus government of Pakistan every Pakistani should be safe of hepatitis B, C virus. Approximately the prevalence of hepatitis B, C in Pakistan caused 3- 4, 6 million infections respectively ([HYPERLINK "http://WWW.hepatitis"](http://WWW.hepatitis) WWW.hepatitis control program, 2007). The policy of World Health Organization (WHO) and World Health Assembly (WHA) with members states to provide such all kinds of health care facilities in worldwide to every child in globally reach immunization program and the prevention of HBV and HCV infections relies on three dose of hepatitis vaccines for infants, prevention of mother to child transmission of B, C , pregnant women testing, blood injection and surgical safety, harm saving of injection drugs, but there is no any serious action to control and prevent of hepatitis B, C in globally (WHA and WHO 2010).

The highest majority, almost all the respondents explained that they did not have safe drinking water, 4% their source of water to received tractor, 95% they used nail caliper at home, 4% they all used tooth brush, 36% uses personal razors of patients, 29% sterilized needle to their bodies, 21% had the patients of hepatitis B, C at their home, 67% they believed to religious scholar and used homeopathic medicines. It is the responsibility to the government of Pakistan to provide immunization programs, increase health funds and safe the country because Afghan refugees also responsible to causes B, C viruses. The government of Pakistan should respond to the treatment needs to chronic hepatitis B, C patients who are not afford to treatment and hospital costs and socio economically are poor condition should be provide all expenditures of B, C patients.

According to consulted physicians the prevalence of hepatitis HBV and HCV viral infection now a days become a serious health issue In worldwide, it is an infection of the liver some time without symptoms, whereas it causes yellow discoloration of skin with tiredness, appetite, meanwhile it may be causes acute, which means very dangerous to liver cirrhosis and chronic infection. They further defined it can causes by many reason, For example hepatitis HBV due to sharing syringes, injecting drugs, blood transfusion, vertical transfusion, from mother to child breast feeding and it may be genetically can infect by generation to generation. The hepatitis subject specialist further said, it can effect by sexual intercourse and also sharing other personal things, it would be razor, soap. Due to many local blood donors are also responsible to spreading of hepatitis B, C, because these blood are not screen which can be causes of virus to human body. The many reason that hepatitis

B, C can cause to liver cirrhosis, and For instance blood transfusion to someone else which is his blood not screen also can affect the people. Hepatitis B usually transmitted by direct blood to bold contact, Organ transplants, it is reported that there are several medical stores they repacking of used syringes, which are available in different medical stores respectively. Most of barbers are illiterate and unawareness of transmission of infectious through the repeated use of razors and scissors for different customers sterilizing them. Hepatitis C, HCV is very less common than hepatitis B, Hepatitis C is very dangerous to liver cirrhosis, and it causes sharing household items such as razors, tooth brush of other people and nail clipper. Both viruses are spread by sharing needles, syringes and sexually, HBV is much more likely than HCV to be transmitted sexually. There are many reason that hepatitis B, C can cause viral infection to human body such as injecting drugs, sexual contact, sharing needle, using other personal items, like tooth brush, nail clipper, blood transfusion, surgical transfusion and it might be mother to child, also genetically. The above mentioned hepatitis B, C all comments gathered Quetta's different subject specialist physicians respectively.

Conclusion:

In this article, Hepatitis B and C have significantly affected the health and socioeconomic condition of people in Quetta district of Balochistan. Major factors seemed to be unawareness, and poverty. For example, in 21st century people used tooth brush of other people, personal razors of infected patients, nail caliper of infected patients, unsafe drinking water, they got blood from blood donors that was not screened and still believe to religious perspective. The prevalence of hepatitis HBV and HCV in Quetta district almost the patients were found belong to very poor family they could not afforded for treatment, whereas the poor socio economic condition also responsible to cause hepatitis B, C because they did not have any safe drinking water, unhygienic food, clean toilet system unawareness. There is need to educate general population regarding HBV and HCV infection and risks associated with inappropriate therapeutic injections administered to all new born children respectively.

Recommendations:

We recommend concerned organizations and authorities to ameliorate long term policies to significantly improve the health care system for the hepatitis HBV and HCV patients. There is urgent need to allocate sufficient budget and ensure its proper utilization. The prevalence of

hepatitis B, C is becoming a serious health problem, which is need to investment, assessment and capacity building to achieve the objectives and eliminate B, C viruses. It is important to provide awareness campaigns and awareness through print media, electronic media about hepatitis B, C viruses. There is need to monitor and evaluate the systems in order to promote protective, healthy environment in hospitals and standard medical facilities for the patients of hepatitis B, C respectively. It is needed to make clean hospitals environment systems and evaluate the different hospitals systems annually and must provide safe syringes, availability of vaccines and medicines for patients.

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