

## ORIGINAL ARTICLE

# Hepatitis C Prevalence in Patients Attending a Free Cataract Surgery Camps in Southern areas of Khyber Pakhtunkhwa, Pakistan

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## ABSTRACT

Hepatitis C is a major public health concern in developing countries. Early research has shown that the prevalence of HCV is extremely high. This has raised questions regarding how preventive measures will be distributed and implemented in the future on a large scale. This study aimed to investigate the prevalence of Hepatitis C in people who were getting cataract surgery at a free eye camp as a potential occupational hazard for healthcare workers. Taking place from the 15<sup>th</sup> to the 18<sup>th</sup> of October 2021 in the Southern areas of Khyber Pakhtunkhwa, Pakistan, free eye camps were hosted at the Welfare Hospitals. In the study, all the patients scheduled for cataract surgery were included. For the screening of these patients for antibodies to Hepatitis C, the Kit Method was utilised. All the information was recorded using a methodical proforma that was followed. The data was analysed to estimate the average age, gender distribution, and prevalence of Hepatitis C in the population. A total of 106 patients scheduled for cataract surgery were tested for hepatitis C. The results were negative. A total of 36 (34 percent) of the patients tested positive for Hepatitis C, with the average age being 61 years old. A basic infection control protocol must be always maintained, even if free eye camps are a fantastic activity for restoring sight to the visually impaired. The development and implementation of legal protocols for these camps should be the responsibility of the government. In addition to posing a concern for the public, this also poses a threat to health-care workers.

## INTRODUCTION

People all around the world, particularly in developing nations, are affected by the human hepatitis virus, which is a serious public health problem that affects people everywhere. A viral infection of the liver caused by the hepatitis C virus (HCV), which is associated with a high mortality rate and a high rate of morbidity and mortality (Singal et al., 2010). Worldwide, 3–4 million people are infected with the hepatitis C virus every year, according to latest estimates from the World Health Organization, with the infection causing liver damage in the majority of those who get the virus (WHO). The United States has around 150 million chronically infected people with hepatitis C, and more than 350 000 people die each year because of hepatitis C-associated liver diseases in the country (Kim, 2002). To name a few of the countries with the highest frequency of chronic HCV infection, Egypt (15 percent), Pakistan (4.8 percent), and China come to mind (3.2 percent) (Ireland, 2019).

In Pakistan, the Hepatitis C virus (HCV) is becoming increasingly prevalent, even though the disease's epidemiology, risk factors, and transmission mechanism are all unknown to a large proportion of the population (Khan et al., 2011). As time passes, the prevalence of the Hepatitis C virus (HCV) in our country continues to rise a little bit more than it did previously. The fact that most HCV patients are asymptomatic is a significant source of concern for medical professionals and other patients who encounter HCV patients while using the same devices as HCV patients (Saleha et al., 2014).

Throughout Pakistan, free eye clinics are open to the public on a regular basis and provide free eye care to those who require it (Gilbert et al., 2008). Several organisations oversee these camps, which are held in various locations throughout the country and where hundreds of patients are operated on for cataract extraction and intraocular lens (IOL) implantation (Joshi, 2015). Since these services are distinct from those provided by established hospitals, there is an increased occupational risk of contracting HCV infection from patients who are treated in these facilities. This is due to the patients who are treated in these facilities. In the United States, approximately 500,00 cases of percutaneous blood exposure among hospital-based health-care professionals are reported on an annual basis, with approximately 500,00 cases reported each year (Beltrami et al., 2000). A study was carried out to determine the prevalence of HCV in patients who were selected for cataract

surgery at a free eye camp and who had their eyes examined because of this critical reason.

## METHODOLOGY

This descriptive cross-sectional investigation was carried out at a free eye clinic offered by Hospital in the Southern areas of Khyber Pakhtunkhwa. Prior to undergoing Cataract surgery, all 106 of the patients had been tested for antibodies to the Hepatitis C virus (HCV). ACON Laboratories Inc. in San Diego, California, provided the ICT: ACON® screening kits, which were distributed by the company. This was accomplished by removing three drops of serum from the tube and depositing them on the gadget that was included in the kit using the dropper contained in the kit. To arrive at a result, an HCV screening sample and a control sample were employed. This kit device was used to deliver three drops of buffer (which was included in the kit) into the sample area. The presence of two bands against the antigens C and T in the samples indicated the presence of anti-HCV antibodies. The information was gathered using a proforma, which was then statistically analysed to determine its relevance to the study.

## RESULTS

This study included a total of 106 individuals who underwent cataract surgery with intraocular lens implantation and were tested for HCV antibodies. Out of 106 patients participated in this study 39 were men (36.79% of the total) and 67 were women (63.21%) representing the entire population. There was a difference in age between the two groups, with a mean of 61 years between them and a range of 42 to 76 years between them. There was a total of 36 patients that tested positive for the Hepatitis C virus during the study (HCV).

Table 1. Age and sex distribution of patients

Age Groups	Distribution among groups					
	Males	Percent	Female	Percent	Total	% age
42-47	9	23.08	12	17.91	21	19.81
48-53	8	20.51	23	34.33	31	29.25
54-59	4	10.26	14	20.90	18	16.98
60-65	12	30.77	5	7.46	17	16.04
66-71	5	12.82	13	19.40	18	16.98
72-77	1	2.56	0	0.00	1	0.94

One-fifth of the thirty-six positive persons were in their forties or fifties, making them a younger age group than the general population (42-59 years). The research findings are presented in Table 2, along with the exact sex distribution of hepatitis positive persons.

Table 2. Gender and age distribution of HCV positive patients

Age Groups	Disease (HCV) Positivity Status				
	Positive (M)	Negative (M)	Positive (F)	Negative (F)	Total Positive
42-47	2	7	0	12	2
48-53	3	5	8	15	11
54-59	0	4	3	11	3
60-65	6	6	4	1	10
66-71	3	2	6	7	9
72-77	1	0	0	0	1

## DISCUSSION

Because cataract is a geriatric condition, most of our target population is in their later years (Eichenbaum, 2012). Although not statistically significant, the frequency of Hepatitis C in these older age groups is relevant because it implies that our culture's epidemic has been going on for considerably longer than we previously believed. HCV antibodies are common in surgical patients, putting surgeons at risk of catching blood-borne viruses from the patients they operate on (FitzSimons et al., 2008).

The eye camps that have been set up in various locations do not all operate according to the same principles (Yorston, 2005). As a result of the high prevalence of Hepatitis C in the health-care business, everybody working in the field faces an occupational risk (Janjua et al., 2010). The prevalence of HCV is higher in this study than in other studies, according to the findings. According to the findings, there was a considerable positive rate for HCV in several age categories, including EPI, indicating the success of a Hepatitis C immunisation programme.

Researchers discovered that hepatitis C is more common in adults between the ages of 55 and 64 in a comparable study conducted in Faisalabad, Pakistan, (Latif et al., 2013) which is consistent with our findings. Several other local and international investigations have discovered that the rate of HCV infection in this community is higher than in the general population (Guadagnino et al., 1997; Kondili et al., 2002; Chawdhury et al., 2003; Baldo et al., 2003; Zhou et al., 2015), contradicting the conclusions of this study.

## CONCLUSION

Hepatitis C is a serious public health problem that affects millions of people. Considering the high prevalence of HCV discovered in this study, it is recommended that more preventive interventions be performed on a larger scale. A basic infection control protocol must be always maintained, even if free eye camps are a fantastic activity for restoring sight to the visually impaired. The development and implementation of legal protocols for these camps should be the responsibility of the government. In addition to posing a concern for the public, this also poses a threat to health-care professionals.

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