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KNOWLEDGE, ATTITUDE AND PRACTICE OF HYDROXYCHLOROQUINE CHEMOPROPHYLAXIS IN HEALTH CARE WORKERS FOR COVID 19

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ABSTRACT

Background: Healthcare workers (HCW) are most susceptible to COVID 19 infection than the general population. ICMR has advised Hydroxychloroquine (HCQ) chemoprophylaxis for healthcare workers in COVID19. The aim of this study is to assess awareness of HCQ chemoprophylaxis for COVID19. **Material and Methods:** HCW willing to take chemoprophylaxis were given HCQ after due written consent under medical supervision. Knowledge, attitude and chemoprophylaxis questionnaire was validated by Chemoprophylaxis committee. HCW satisfying the inclusion and exclusion criteria were included after consent. Total of 280 subjects were included; out of this 140 were doctors and 140 were HCW other than doctors. **Results:** The mean age of HCW was 31.42 ± 7.87 years. There were 126 females and 154 males. 204(72.86%) HCW had accepted HCQ for Covid 19 prophylaxis. 236(84.29%) HCW followed government websites for knowledge of Covid 19. Other than HCQ, Vitamin C 208(72.5%) and Ivermectin 23(8.21%) were used for Covid19 chemoprophylaxis. 29(10.36%) of HCW had started HCQ self medication. 47(9.79%) forgot to take medicine and 35(12.5%) developed side effects. In 22(7.86%), Epigastric discomfort was the major side effect reported. 62 (22.14%) had taken medicines for adverse effects due to HCQ. 24(8.58%) had done investigation before taking prophylaxis. 262(93.57%) had taken prophylaxis in order to protect family members and 251 (89.64%) had taken as there is no definite treatment of Covid19. 219(78.21%) feel family members should also be given Covid 19 prophylaxis. **Conclusion:** Knowledge, attitude and practice of HCW regarding HCQ chemoprophylaxis was found to be inadequate. Doctors had more knowledge than other HCW but the attitude and practice were the same for all HCW. There is need for training for HCW availing Covid 19 duty.

KEYWORDS: Hydroxychloroquine, Covid 19, Chemoprophylaxis, Self medication.

INTRODUCTION

A series of pneumonia cases were observed on December 2019, emerging from Wuhan, Hubei, China and this was the epicenter of a pandemic caused by Severe Acute Respiratory Symptom Coronavirus 2 (SARS-CoV 2) responsible for Corona Virus Disease (COVID) 2019.[1] SARS-CoV 2 is spreading in India with more than 75 lakh cases and increasing day by day.[2] Indian Council of Medical Research (ICMR) under the Ministry of Health and Family Welfare (MOHFW) has recommended Hydroxychloroquine (HCQ) chemoprophylaxis for asymptomatic Healthcare Worker (HCW) treating patients with suspected or confirmed COVID19. HCQ is prescribed for chronic diseases like Systemic Lupus and Rheumatoid Arthritis in daily dose ranging from 200mg upto 400mg for prolonged treatment periods with good tolerance.[3]

An invitro study at National Institute of Virology reported HCQ to have antiviral efficacy shown by logarithmic reduction in viral RNA copy of SARS-CoV-2.[3] ICMR constituted Covid-19 National Task Force (NTF) that reviewed HCQ for prophylaxis of SARS-CoV-2 infection in high risk population. [3,4] With the available evidence, ICMR has opined that when certain contraindications are avoided, HCQ has beneficial effect

as prophylactic option.[3] Following ICMR guidelines HCQ prophylaxis was started in our centre. The purpose of the study was to evaluate knowledge, attitude and practice of HCQ chemoprophylaxis in HCW for Covid-19.

MATERIAL AND METHODS

HCQ Chemoprophylaxis (CP) committee was formed to implement ICMR recommended HCQ-CP for SARS-CoV-2 infection in HCW of medical college and tertiary care hospital. Institutional Ethics Committee permission was taken before starting the study. HCW willing to take chemoprophylaxis were given HCQ after due written consent under medical supervision. A room was designated in Pharmacology department where HCW can come voluntarily and take their chemo prophylactic dose.

HCW were advised to consult physician for history of heart disease, known case of adverse drug reaction to medication. All HCW taking HCQ-CP were advised frequent use of sanitizer for washing of hands, respiratory etiquettes, keeping a distance of minimum one meter and use of Personal protective gear in accordance with MOHFW and ICMR guidelines. If any HCW becomes symptomatic while on chemoprophylaxis, they have to immediately contact fever outpatient department to get tested as per ICMR guidelines and follow standard treatment protocol. Participation in study was voluntary and HCW willing to give informed consent were enrolled in study.

Objectives of the study were briefed to participants and written informed consent was obtained. Patient information sheet and written informed consent in three languages was administered to HCW taking HCQ chemoprophylaxis. The initial part of the questionnaire consisted of demographic information containing education, designation, years of service, comorbidities (hypertension, diabetes mellitus, lung disease and other). Questionnaire of knowledge, attitude and practice towards Covid-19 chemoprophylaxis were prepared on the information available on MOHFW and ICMR.[2,3,4] Marking was given to each question and total score was given for each section of knowledge, attitude and practice respectively. For the knowledge questions, incorrect or (do not know) responses were given a 0 (zero) score, while 1(one) point was given for correct answer. The correct answers were decided by the Chemoprophylaxis committee members based on available information on MOHFW, ICMR and World Health Organization (WHO) websites. The expected maximum total knowledge score was 10 (ten). For the attitude and practice sections, a score of 01(one) was given for choosing the answer reflecting a positive attitude or good practice and 0(zero) was given for choosing the answer reflecting negative attitude or poor practice. The expected maximum total attitude score was 09 (nine) and maximum total practice score was 09 (nine).

Content and face validity of questionnaire was done by members of chemoprophylaxis committee. The validity (content and criterion) and reliability (test-retest reliability) of the questionnaire was tested by chemoprophylaxis committee. Test–retest reliability was estimated with a subsample of 10 HCW by giving questionnaire seven days apart; these were not included in the final analysis. Internal consistency reliability by Cronbach's-alfa coefficient was 0.76.

The inclusion criteria were based as per Joint Monitoring Group and NTF that recommended chemoprophylaxis use of HCQ.[3,4] Inclusion criteria were age group from 18 to 55 years of either gender, all asymptomatic HCW involved in the treatment of COVID19, all asymptomatic HCW working in non-COVID ward, asymptomatic HCW involved in COVID-19 related activities. The drug was contraindicated in persons with known case of history of retinopathy, hypersensitivity to HCQ or 4-aminoquinoline compounds, history of Glucose-6-phosphate dehydrogenase (G6PD) deficiency, pre-existing cardiomyopathy, cardiac rhythm disorders, pregnancy and lactating women.[4]

The sample size was determined using the Epi Info 7 software.[5] There were around 1000 employees working in medical college and tertiary care hospital. The calculations were based on the assumption that 50% of the HCW will be having good knowledge attitude and practice of chemoprophylaxis at 95% confidence interval, limit of precision of 5% and design effect of 1.0, the calculated sample size was 280 participants. Total 280 HCW were included in the study. They were divided in two groups with Group I (Only doctors) and Group II (HCW other than doctors). 280 HCW, willing to give consent as well as satisfying inclusion and exclusion criteria were included in the study. These included 140 doctors and 140 HCW other than doctors.

Descriptive statistical methods were used to summarize data on socio-demographic characteristics. Data was summarized as frequencies and percentages for categorical variables. Student's unpaired t test was used for quantitative data while Chisquare and Fishers exact test were used to determine the relation between qualitative socio-demographic variables and various aspects of knowledge, attitude and practice. All data analyses were performed using GraphPad Software version 8.1, La Jolla California USA, www.graphpad.coms.

RESULTS

The mean age in the study was 31.42 ± 7.87 (years), in group I was 29.47± 7.36 and in group II was 33.38 ± 8.37 (P<0.0001). The age range was from 23 to 57 years. Group I had 140 Doctors that included 03 Professors, 07 Associate Professors, 20 Assistant Professors, 65 Residents and 45 Interns. In group I, there were 30 postgraduates, 110 were graduates. In group II, there were 35 postgraduates, 87 graduates, 10 had completed

diploma, while 06 had completed secondary standard and 02 had completed primary school. The mean experience in was 6.29 ± 3.1 years, in group I was 3.67 ± 2.7 years and in Group II was 8.91 ± 3.5 years (P<0.001). Socio-demographic characteristics of study participants are given in Table 1. Knowledge regarding HCQ chemoprophylaxis in HCW is given in Table 2. HCW had on average completed 4.12 ± 0.94 weeks of HCQ prophylaxis, group I had completed 4.09 ± 0.97 weeks while group II had completed 3.15 ± 0.91weeks (P<0.001). On the scale of 0 to 100 (0 being least and 10 being maximum) HCW were scared of Covid 19, with mean score being 8.07 ± 3.23, Group I had score of 7.18 ± 2.72 and Group II had score of 84.03 ± 1.44 (P<0.001). On the scale of 0 to 100 (0:Nil to 100:100%) HCW felt the risk of getting infection even after taking precautions as per MOHFW and for which they feel the need to take HCQ chemoprophylaxis was 34.69 ± 27.3, group I felt the risk was 27.63 ± 24.66 and Group II felt the risk was 41.75 ± 29.94 (P<0.001). Out of 280 HCW, 273 (97.5%) (Group I=135, Group II=138) feel the need of training related to Covid19 (p=0.25)**.** Attitude towards HCQ chemoprophylaxis in HCW is given in Table 3. Practice related to HCQ chemoprophylaxis in HCW is given in Table 4.

DISCUSSION

Covid19 started in from Kerala, India in January 2020 and now India ranks second by cumulative cases in the world, after United states of America.[6,7] HCW are at the forefront of this war against Covid19 and likelihood of acquiring these diseases is higher among HCW as compared to general population.[8] HCQ is being used for treatment of COVID19 and ICMR has advised use of HCQ for chemoprophylaxis in HCW.[9,10] However data on knowledge, attitude and practice of HCQ chemoprophylaxis are lacking.

In our study knowledge regarding HCQ chemoprophylaxis was more in doctors compared to other HCW. The dosage schedule for HCQ prophylaxis was not known by HCW other than doctors. 10.36 % of HCW had started self medication for COVID19 chemoprophylaxis. HCW in our study had started Ivermectin, Vitamin C, Azithromycin and Arsenic album other than HCQ, for Covid19 Prophylaxis. Vitamin C and Ivermectin are easily available and at low price thus carries substantial odds for self-medication.[11] MOHFW has advised no role of antibiotics against viruses.[12] Arsenic album a Homeopathy medication was proposed by Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH) department for prevention of Covid 19.[13] As HCW tend to self medicate, rational use of medicines and polypharmacy should be emphasized.[14]

In presence of HCQ, S protein is not able to bind gangliosides and ACE2, the initial step for viral replication.[15,16] Another in vitro study revealed both choloroquine and remdesivir are effective at entry and post-entry stages of SARS-CoV-2 infection.[17] Reduction of antigen presentation owing to elevation of pH by HCQ decreases the antigen major histocompatibility complex thereby resulting in suppression by activation of T-cells and other cytokines.[16,18,19] Thus HCQ has shown to have diverse mechanism of action in Covid 19 ranging from antiviral action to PH alteration and immunomodulator.

In our study 84.29% of HCW used government guidelines to get information followed by Internet. In study by Olum etal, 74% had used social media like facebook, whatsapp for source of information on Covid 19.[11] Social media platforms provide an easy and accessible ways of getting information, but they are not always authentic. Any misinformation of medicines may lead to use of this medicines without medical supervision.[20]

Other diseases like Malaria where chloroquine has definite effect as chemoprophylaxis, the acceptance rate in travelers was 52% to 89 %.[21] In study by Bhattacharya 76% of the HCWs had accepted the HCQ Covid19 prophylaxis.[22] The HCQ acceptance in our study is similar in other studies but main reasons for missing HCQ chemoprophylaxis was that majority forgot to take medicine in a scheduled time and some HCW had developed side effects. HCW complained of epigastric discomfort after HCQ and for this HCW had used antacids along with HCQ chemoprophylaxis. Study by Bhattacharya had mentioned common reasons for not taking HCQ chemoprophylaxis that were fear of side effects and are already on other medication.[23] HCW should be made aware of the side effects of HCQ and to report ADR to Pharmacovigilance Programme of India or pharmacovigilance committee. The role of other medicines for Covid 19 chemoprophylaxis should be investigated and advised especially in contraindications of HCQ. HCQ being a weekly regimen for prophylaxis many HCW found it is difficult to remember. To overcome this, chemoprophylaxis committee had fixed a day in a week for particular departments, so that in a week all departments were covered and the schedule was daily posted on whatsapp group as reminder for HCQ prophylaxis.

In our study HCW felt that aerosol generating procedures and PPE doffing make them susceptible to Covid19. Majority of HCW in our study take HCQ to protect themselves and family members because there is no effective treatment for Covid19. In other studies, HCWs were more concerned by the infection of colleagues, infection of family members, regarding protective measures and medical violence.[23,24] In our study 64.64% of HCW feel that the risk of infection becomes less after taking due precautions by MOHFW along with HCQ chemoprophylaxis.

Study by Bhattacharya had shown that voluntary HCQ consumption as pre-exposure prophylaxis by HCWs is

associated with statistically significant reduction in risk of SARSCoV-2.[23] In study by ICMR for HCQ prophylaxis showed that those taking HCQ prophylaxis for median of 6 weeks follow-up had lower incidence of SARS-CoV-2 infection. ICMR found significant dose-response relationship, as the number of prophylactic doses taken increased the frequency of occurrence of SARS-CoV-2 infection decreased in symptomatic HCW.[4] ICMR has given HCQ recommendation for treatment and prophylaxis based on risk benefit consideration and for protection of high risk individuals.

A Multivariate model indicated that after four HCQ doses, protective effects start and there is significant reduction (>80%) in the odds of SARS-CoV-2 infection in HCWs taking six or more doses of HCQ prophylaxis but HCQ prophylaxis has to be taken in tandem with PPE use and protective measures.[25] Metanalysis by Sarma has stated that treatment with HCQ resulted in less number of cases showing radiological progression of lung disease.[26]

HCQ has shown excellent oral bioavailability along with high tissue concentrations in lungs relative to the plasma levels with acceptable safety profile, this makes HCQ appropriate candidate for COVID-19 prophylaxis.[28,29] ICMR had recommended HCQ for 8 weeks and NTF even further recommended its use beyond 8 weeks, on weekly dosage.[3,4]

Even though knowledge score of HCQ Chemoprophylaxis in our study was more in doctors than other Healthcare workers, the positive attitude score and practice score were almost same for all the HCW. This can be attributed to the instructions given regarding protective measures as per MOHFW to HCW while taking chemoprophylaxis.[3] There is an urgent need of training module that includes chemoprophylaxis, rational use of medicines, PPE donning doffing procedure, pharmacovigilance and psychological aspects related to Covid 19.

Chemoprophylaxis has been demonstrated to be a successful modality in a preventive medicine in other infectious diseases including malaria, Human immunodeficiency virus and influenza. Mathematical model exploring effectiveness of prophylaxis versus treatment in an Influenza pandemic predicted that targeted prophylaxis could delay the pandemic onset by 6-18 months during which effective vaccines against the disease could be developed.[27] Currently there is no medicine effective for COVID 19 treatment. It will take time for effective vaccine to be made available for all HCW. Thus, chemoprophylaxis remains the only available option.

Table 1: Socio-demographic characteristics of HCW.

Demographic Characteristics		Total (Percentage)	Group I	Group II	P value
Age Group	< 30 years	172 (61.43)	104	68	0.0002
	30 to 40 years	67 (23.93)	22	45	
	40 to 50 years	27 (9.64)	8	19	
	>50 years	14 (5.00)	6	8	
Gender	Female	126 (45.00)	65	61	0.6309
	Male	154 (55.00)	75	79	
Profession	Doctors	140 (50.00)	140	0	<0.0001
	Nurses	32 (11.43)	0	32	
	Ward boys	38 (13.57)	0	38	
	Laboratory Technician	31 (11.07)	0	31	
	Pharmacist	25 (8.93)	0	25	
	Laboratory assistant	14 (5.00)	0	14	
Comorbidities	Hypertension	34 (12.14)	10	24	0.0036
	Diabetes Mellitus	12 (4.29)	2	10	
	Ischemic heart disease	2 (0.71)	0	2	
	Thyroid	2 (0.71)	0	2	
	No Co morbidity	245 (87.50)	130	115	

Table 2: Knowledge regarding HCQ chemoprophylaxis in HCW.

Sr. No	Knowledge Questions		Total (Percentage)	Group I	Group II	P value
1	What is the incubation period of Covid-19 in days	1-3	54 (19.29)	3	51	<0.0001
		1-14	131(46.79)	103	28	
		1-28	89 (31.79)	34	55	
		Don't Know	06 (2.14)	0	6	
2	Covid 19 caused by which type of virus	RNA Virus	201 (71.79)	132	69	<0.0001
		DNA Virus	27 (9.64)	2	25	
		Bacteria	15 (5.36)	0	15	
		Don't know	37 (13.21)	6	31	

3	First City to have Covid 19 case in World	Wuhan	260 (92.86)	137	123	0.0251
		New York	08 (2.86)	1	7	
		Mumbai	0 (0.00)	0	0	
		London	0 (0.00)	0	0	
		Don't know	12 (4.29)	2	10	
4	HCQ Chemoprophylaxis schedule given by	ICMR	200 (71.43)	138	62	<0.0001
		MOHFW	62 (22.14)	31	31	
		WHO	66 (23.57)	27	39	
		Don't Know	08 (2.86)	0	8	
5	Confirm Diagnosis of Covid 19 acute infection is done by@	Antibody	37 (13.21)	03	34	<0.0001
		RTPCR	212 (75.71)	139	73	
		Rapid Antigen Test	92 (32.86)	57	35	
		Don't know	19 (6.79)	1	18	
6	Which Medicine do you take for chemoprophylaxis of Covid 19 @	HCQ	280 (100.00)	140	140	<0.0001
		Vitamin C	208 (74.29)	112	96	
		Ivermectin	13 (4.64)	12	1	
		Azithromycin	16 (5.71)	14	2	
		Arsenic album	103 (36.79)	36	67	
7	Do you know the dosage schedule for HCQ-CP	Yes	169 (60.36)	116	53	<0.0001
		No	111 (39.64)	24	87	
8	What is the dosage schedule HCQ-CP	Yes	130 (46.43)	96	34	<0.0001
		No	150 (53.57)	44	106	
9	Proposed Mechanism of action of HCQ-CP in Covid 19	Antiviral	114 (40.71)	97	17	<0.0001
		PH alteration	27 (9.64)	15	12	
		Immunomodulator	39 (13.93)	23	16	
		Don't know	100 (35.71)	5	95	
10	Source of knowledge for Covid 19 and HCQ –CP @	Television	136 (48.57)	63	73	0.021
		Whatsapp, Facebook other social media	213 (76.07)	103	110	
		ICMR,MOHFW	236 (84.29)	140	96	
		Print Media	77 (27.50)	42	35	
		Internet	235 (83.93)	140	95	
Mean Knowledge Score			7.46 ± 1.55	9.16 ± 0.88	5.77 ±2.22	<0.0001

@(Can tick multiple options)
(RNA: Ribonucleic acid) (DNA: Deoxyribonucleic Acid) (RTPCR: Realtime polymerase chain reaction)

Table 3: Attitude towards HCQ chemoprophylaxis in HCW.

Sr No	Attitude Questions		Total (Percentage)	Group I	Group II	P value
1	Are you involved in work related to covid-19 positive patient	Yes	241 (86.07)	133	108	<0.0001
		No	39 (13.93)	07	32	
2	Are you taking HCQ-CP regularly every week	Yes	218 (77.85)	111	107	0.56
		No	62 (22.14)	29	33	
3	Where did you start HCQ – CP for Covid-19	At Hospital	251 (89.64)	119	132	0.0108
		Self medication	29 (10.36)	21	8	
4	Are you scared of Covid 19	Yes	227 (81.07)	101	119	0.008
		No	53 (18.92)	39	21	
5	Do you feel HCQ can be used as chemoprophylaxis for Covid 19	Yes	204 (72.86)	123	81	<0.0001
		No	76 (27.14)	17	59	
6	Reasons for missing the dose of HCQ@	Forgot to take the medicine	47 (16.79)	21	26	0.072
		Developed Side effect	35 (12.50)	22	13	
		I feel HCQ chemoprophylaxis is not effective	33 (11.79)	12	21	
		I am also taking other drugs for prophylaxis	42 (15.00)	15	27	

7	Do you feel all health care workers should be given chemoprophylaxis	Yes	244 (87.14)	117	127	0.074
		No	36 (12.86)	23	13	
8	Do you think Family member should get the Chemoprophylaxis	Yes	219 (78.21)	116	103	0.059
		No	61 (21.79)	24	37	
9	Why are you taking HCQ chemoprophylaxis @	Working in Covid 19 Ward/OPD	214 (76.43)	113	101	0.024
		I want to protect myself and my family members	262 (93.57)	126	136	
		Guidelines given by MOHFW	128 (45.71)	75	53	
		There is no treatment for Covid	251 (89.64)	136	115	
10	Do you think you have the risk of getting infection even after taking precautions as per MOHFW for which you are taking HCQ prophylaxis	Yes	99 (35.35)	40	59	0.017
		No	181 (64.64)	100	81	
Mean Positive Attitude Score			7.86 ± 1.13	8.04 ±0.94	7.68 ± 1.31	0.0087

@ (Can tick multiple options) (OPD: Outpatient Department)

Table 4: Practice related to HCQ chemoprophylaxis in HCW.

Sr No	Practice Questions		Total (Percentage)	Group I	Group II	P value
1	Do you use personal protective equipment in Ward/OPD after taking HCQ chemoprophylaxis	Yes	192 (68.57)	113	79	<0.0001
		No	88 (31.43)	27	61	
2	Have you done investigation before taking chemoprophylaxis	Yes	24 (8.57)	14	10	0.3932
		No	256 (91.43)	126	130	
	If yes which of the following	Baseline ECG	24 (8.57)	14	10	
		G6PD	0 (0.00)	0	0	
		Liver Function Test	0 (0.00)	0	0	
		Retinal Test	0 (0.00)	0	0	
3	Consulted Physician before taking Chemoprophylaxis	Yes	95 (33.93)	31	64	<0.0001
		No	185 (66.07)	109	76	
4	Did you suffer any side effect	Yes	35 (12.50)	22	13	0.1039
		No	245 (87.50)	118	127	
5	Which of the following side effect you suffered after taking HCQ chemoprophylaxis	Epigastirc discomfort	22 (7.86)	13	9	0.7343
		Vomiting	2 (0.71)	1	1	
		Headache	11 (3.93)	8	3	
		Ocular Symptoms	0 (0.00)	0	0	
		Allergic reaction	0 (0.00)	0	0	
6	Have you reported adverse reaction of HCQ CP to PvPi or Pharmacovigilance committee	Yes	3 (1.07)	3	0	0.08
		No	277 (98.93)	137	140	
7	Do you take any other medicine to prevent adverse effect due to HCQ	Yes	62 (22.14)	37	25	0.08
		No	218 (77.86)	103	115	
	If yes which medicines have you taken @	Antacids	30 (10.71)	18	12	0.919
		Antiemetic	4 (1.43)	2	2	
		PPI , Ranitidine	38 (13.57)	23	15	
		Other	0 (0.00)	0	0	

8	Which precautions you take while working @	Sanitizer use frequently	280 (100.00)	140	140	1.0
		Mask use all time	280 (100.00)	140	140	
		Safe distance of 1 meter	280 (100.00)	140	140	
		Avoid touching eyes, nose and mouth	280 (100.00)	140	140	
9	Which procedure do you think makes you most susceptible for Covid 19 for which HCQ as chemoprophylaxis is important@	Performing/Assisting aerosol generating procedure	176 (62.86)	113	63	0.0014
		PPE Doffing	162 (57.86)	93	69	
		Taking nasopharyngeal sample	58 (20.71)	23	35	
		Taking vitals	34 (12.14)	13	21	
10	In doffing which is the most important step you feel @	Removing coverall	175 (62.50)	110	65	0.6388
		Removing shoecover	168 (60.00)	106	62	
		Removing N95	64 (22.86)	37	27	
		Disposing PPE in kit bag	167 (59.64)	96	71	
Mean Practice Score			4.39 ±1.07	4.52 ± 1.09	4.26 ± 1.05	0.043

@(Can tick multiple options)
(ECG: Electrocardiography) (PPI: Protonpump Inhibitors) (PPE: Personal Protective Equipment)

CONCLUSION

From the present study it can be concluded that training to impart knowledge, positive attitude and correct practices is important. The study helped to find the gaps glitches in chemoprophylaxis by HCW that can serve as baseline data to design effective interventions to evaluate the prevention strategies for HCW in regards to Covid 19 chemoprophylaxis. Studies are needed to establish importance of education and awareness policy related to Covid 19 Chemoprophylaxis in HCW. Studies related to proof of concept and pharmacokinetics should be taken up expeditiously for medicines that have shown activity against Covid19. With the opening of offices, shops and transportation, subsequent Covid 19 wave can be expected in coming months.[30] Thus chemoprophylaxis for HCW seems to be the solitary option for HCW that can help to surmount this pandemic.

The study has limitations, as it is done in one centre; the results might differ across different health professions in other medical college and hospital. There is a chance of potential bias because of a different interpretation of questions related to various educational backgrounds. Because of small sample size, the subgroup analyses were not done.

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