



Side Effects of COVID Vaccination among the Residents of Shimla

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Abstract

Objective; *To study the side effects of COVID-19 vaccines among the patients visiting health centre at Shimla.*

Methods: *Patients visiting the health centre were enquired about the side effects of COVID-19 vaccine experienced by them.*

Results: *38% felt no side effects, neither after 1st dose, nor after 2nd dose. 2% reported improvement in overall health. 18% reported side effects after 2nd dose. 43% experienced side effects after 1st dose.*

38% felt no side effects. 33% had fever. 8% had body pain, 6% had pain in the arm, 5% had weakness and fatigue. 2% had joint pains. 1% each had pain in legs, hypertension, giddiness, stiffness in body and diarrhoea. 1% had clotting. 1% each experienced increase in appetite and improvement in body pains after the vaccination.

Conclusions; *Majority of the patients had either no side effects or only mild side effects and some had reported in improvement in overall health.*

Practical implications: *This study demonstrated that benefits of vaccination greatly outweigh the risks.*

Introduction

Corona Virus Disease-2019 also known as COVID-19 was first identified in Wuhan, China in Dec. 2019. In Jan. 2020 World Health Organization declared it as pandemic. It took many lives world over. Many new variants of concern emerged in different countries. Incubation period was 7-24 days. Symptoms varied from fever to influenza like illness with loss of sense of smell and taste. Later on patients also reported

gastrointestinal symptoms, extreme weakness etc. Patients were kept in isolation for a period of 14 days to prevent spread of infection. Many patients recovered after 14 days with symptomatic treatment and residual weakness but lots of patient became serious and required oxygen and ventilators. Health personnel were more at risk. Patients with co-morbidities like chronic kidney disease, diabetes and hypertension suffered most. Some had serious consequences like stroke. Anti

virals like Remdesivir and Flavipiravir were used, but with no specific treatment and high rate of morbidity and mortality need for vaccination was need of the hour. Many vaccines were developed from mRNA Pfizer –BioNTech to adenovirus based Astra- Zenacea Covisheild, inactivated Covaxin , Sputnik V, (1) Two doses were given Initially, later on precaution dose was added for susceptible population. Major issues in motivating the people to get vaccinated were concerns about safety and side effects of vaccines. Therefore this survey was conducted to study the actual side effects experienced by the recipients of the COVID-19 vaccines and will help us understand the nature of the adverse effects of these vaccines.

Materials and Methods

Research Design

Quantitative research approach, a cross sectional study was conducted in which data was gathered from the patients visiting the health centre at Shimla, India.

Study Period

January 2022 to May 2022

Method of data analysis

Data analysis was conducted using statistical techniques, including percentages. Descriptive statistical techniques were used to analyze and present issues, such as socio-demographic characteristics of the respondents, perception and experiences regarding the side effects of COVID-19 vaccine, their vaccination history, among other things.(11)

Result

Table 1

1	Gender	Males----- Females----	-61% 39%
2	Education	Undergraduate Graduate Postgraduate	56% 24% 20%
3	Age	60+ 45-59 18-44	6% 48% 46%
4	Co-morbidities	Hypertension Diabetes Hypothyroidism Arthritis Asthma	28% 11% 7% 6% 3%
5	Vaccine	Covisheild Covaxin Sputnik	92% 7% 1%

Table 1. presents data pertaining to socio demographic characteristics of the respondents. It is shown that 61% of respondents are males and 39% are females. Educational status reveals that most of them 56% are undergraduate, 24% are graduate and 20% are post graduate. Most of the patients were in age group of 45 -59 years (48%), followed by 18 -44 years(46%) and only 6% are in age group of above 60 years. Regarding co-

morbidities 28% were suffering from hypertension, 11% from diabetes, 7% from hypothyroidism , 6% from arthritis and 3% from asthma. 92% were vaccinated with covisheild, 7% with covaxin and 1% with sputnik.

Table 2

1	NIL	38%
2	Fever	33%
3	Body pain	8%
4	Pain in the arm	6%
5	Weakness and fatigue	5%
6	Joint pains	2%
7	Pain in legs	1%
8	Increase in appetite	1%
9	Hypertension	1%
10	Giddiness	1%
11	Clotting	1%
12	Improvement in body pain	1%
13	Stiffness in body	1%
14	Diarrhoea	1%

Data presented in table 2 reveals that majority of the participants (38%) experienced no side effects after the vaccination, rather 1% reported improvement in body pain and 1% had increase in appetite. 33% experienced fever followed by 8% who experienced body pains, 6% had pain in the arm, 5% suffered from weakness and fatigue, 2% complained joint pains, 1% had pain in legs, 1% reported hypertension after the vaccination, 1% had giddiness, 1% suffered from clotting disorder, 1% complained stiffness in body and 1% had diarrhoea.

Table 3

Side effects	Percentage
After 1 st dose	43%
After 2 nd dose	18%

Discussion

COVID -19 has become one of the major causes of death globally. Vaccination would no doubt help to maintain public health and safety. Vaccine reactogenicity represents various local and systemic manifestations because of inflammatory response to vaccination.⁽²⁵⁾ Therefore it is likely that most individuals would exhibit vaccine reaction post COVID 19 vaccination. Survey shows that 62% of the participants experienced some adverse reaction due to COVID 19 vaccination. Most common adverse effects

experienced by the participants were fever, body pain, pain in the arm, weakness and fatigue, joint pains, pain in legs, hypertension, giddiness, clotting, stiffness in body and diarrhoea.

43% experienced side effects after the 1st dose and only 18 % experienced after 2nd dose.

In our study only 2% required treatment at hospital for adverse effects after vaccination. Most adverse effects were not severe and self-limiting.

In conclusion adverse effects of vaccines developed mostly within 2-3 days of vaccination and about 95% are mild requiring no or home based treatment.

This public knowledge of nature of side effects would in still confidence and overcome vaccine hesitancy among people and enhance vaccine coverage which is the need of the hour

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