



SPECTRUM OF SIDE EFFECTS POST COVID-19 VACCINATION.

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ABSTRACT

The main aim of this study was to check the independent evidence of side effects due to Covishield/Astrazena covid-19 vaccine. A cross-sectional study that was survey-based was conducted between January and March 2021 in GMC, Srinagar. Data was collected on the side effects after taking vaccine shot for covid-19 among urban population who got vaccinated at SMHS Hospital. This included both health care workers and general population. A self formulated validated questionnaire with fifteen questions based on demographic parameters, and vaccine related side effects was formulated. Development of symptoms after vaccination (60%), Injection site pain (60%), local reaction and or bruising (6%) but only female patients. Nausea and gastrointestinal symptoms (10%), Headache (42%), fatigue (3%), Myalgias and joint pain (60%), fever and chills (44%). In addition to this flu like symptoms were found in (12%), vomiting (2%) and only males. Cough after vaccination was seen in (10%). There was no evidence of any facial palsy, lymphadenopathy or any delayed anaphylactic reaction. However, some atypical side effects like phlebitis was found in one patient, insomnia in two patients, hypertension and tachycardia in four patients and one patient developed panic attack after vaccination procedure. Overall it was observed that the side effects experienced by the health care workers and some of the urban population were much similar to the ones that were consistent with those of the manufacturer's data. Additionally, there is need of more studies based on vaccine safety on larger groups of population in order to support confidence levels of people in the vaccination procedure.

KEYWORDS : Covid-19 vaccine, Covishield/Astrazena, Vaccination procedure.

INTRODUCTION:

The commencing of the COVID-19 vaccination process in December 2020 was a marker for overcoming the existing pandemic crisis.² Some of the side effects after covid-19 vaccination may mimic the symptoms of disease thus leading to vaccine hesitancy. Vaccine hesitancy is an emerging challenge to public health leading to delay in taking vaccination. This also leads to refusal of vaccination due to inadequate knowledge about the vaccination or development of various phobias among general population despite vaccine availability. This rising challenge is being supported by various half-truths that are associated with safety and effectiveness of vaccines.^{1,2,3}

In United Kingdom (U.K.) the most common cause for vaccine hesitancy was found to be fear posed by vaccination side effects.⁴ Similar finding was seen in a study conducted in Poland where panic of side effects was the imperative hesitancy basis among healthcare workers and students.^{5,6} Consequently, it was observed and also suggested by various studies that in order to tackle the vaccine hesitancy it was important to raise awareness about vaccination among people for improving vaccine uptake.⁷ The vaccination launch was an important marker and thus it may be recommended to split the covid pandemic history to pre-vaccination phase i.e. before the availability of vaccine and post-vaccination phases or after vaccine phases.⁸

During vaccination against different diseases different spectrum of side effects have been found in different types of vaccines. According to a study on influenza vaccination side effects it was found that 8% of the subjects who were vaccinated for influenza developed oral side effects.⁹ The oral cavity has been always a common focus for the side effects of various vaccines like diphtheria, tetanus, acellular pertussis, and even polio vaccines.⁹ Occurrence of oral symptoms after covid-19 vaccination were accredited to the high expression of angiotensin-converting enzyme 2 receptors in the epithelium of tongue, and the mucosal surfaces of buccal cavity and gingival surfaces.¹¹⁻¹⁷ A lack of independent studies on vaccine safety may have unfavourable impact on the vaccine uptake

among people.^{1,7} There are different side effects due to vaccination process and may vary in different individuals. However, this depends on the humoral response after the prophylactic vaccine dose.¹⁰

Therefore, this study's major aim was to find the prevalence of covishield COVID-19 vaccine adverse effects among the healthcare workers and urban population who got vaccinated at SMHS, Hospital.

MATERIALS AND METHODS:**Study design:**

A cross sectional survey-based study was carried on the people who got vaccinated at SMHS, Hospital from January to march 2021 with covishield vaccine.

Study participants:

Both health care workers and urban population who got vaccinated at SMHS, Hospital from January to March 2021 with covishield vaccine.

Questionnaire form:

A self reported, validated questionnaire was formulated based on various aspects of covid-19 vaccination side effects.

Inclusion Criteria:

Health care workers and urban population who were willing to participate.

Exclusion Criteria:

People who were not willing to fill the questionnaire.

Data collection:

Questionnaire form was given to willing participants and was collected back after they gave their written informed consent and filled the details on questionnaire form. Prior to this, all participants were explained about the purpose of this study and its usefulness for scientific purpose.

RESULTS AND DISCUSSION:

Development of symptoms after vaccination was found in (60%), Injection site pain (60%), local reaction and or bruising

(6%) but only female patients. Nausea and gastrointestinal symptoms (10%), Headache (42%), fatigue (3%), Myalgias and joint pain (60%), fever and chills (44%). In addition to these, flu like symptoms were found in (12%), vomiting (2%) and only males. Cough after vaccination was seen in (10%). There was no evidence of any facial palsy, lymphadenopathy or any delayed anaphylactic reaction. However, some atypical side effects like phlebitis was found in one patient, insomnia in 2 patients, hypertension and tachycardia in 4 patients and one patient developed panic attack after vaccination procedure.

Table 1: Comparison Of Vaccine Side Effects In Males And Females.

Post vaccine side effects	Males	Females
Symptoms	38%	22%
Tenderness at vaccination site	36%	24%
Local reaction/bruising	None	6%
Nausea and gastrointestinal symptoms	4%	6%
Headache	24%	18%
Myalgias and joint pain	38%	22%
Fever and chills	34%	10%
Flu like symptoms	6%	6%
Vomiting	2%	None
Cough	6%	4%

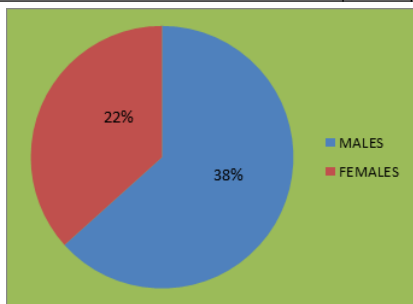


Fig.1: Symptoms in males and females

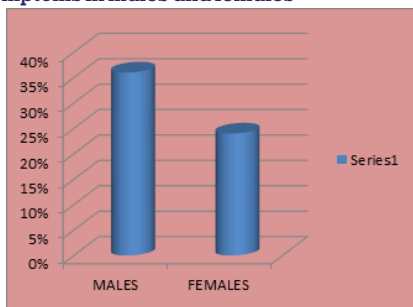


Fig.2: Tenderness at the injection site

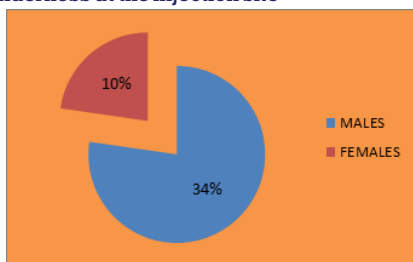


Fig.3: Episode of fever in males and females

CONCLUSION:

Overall it was observed that the side effects experienced by the health care workers and some of the urban population were much similar to the ones that were consistent with those of the manufacturer’s data. Additionally, there is need of more studies based on vaccine safety on larger groups of population in order to support confidence levels of people in the vaccination procedure. This will help to boost development

of immunity against covid-19 and therefore, help in reducing the mortality.

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