

A Study on Perception and Attitude of Mothers Regarding Pentavalent Vaccine in District Amritsar, Punjab

Satpreet Kaur¹, Vandna²

¹Nursing Officer, Post Graduate Institute of Medical Education and Research, Chandigarh

²Associate Professor, University College of Nursing, Baba Farid University of Health Sciences, Faridkot, Punjab

Corresponding Author: Satpreet Kaur

ABSTRACT

Background: Immunization is considered as one of the most important public health interventions to control the vaccine preventable diseases especially in children. The advent of combination vaccines significantly reduced the volume of the immunization activities by reducing the number of injections, amount of pain and also the cumulative exposure to preservatives and stabilizers which may contribute to various and severe adverse effects. [6,7] Pentavalent vaccine protects against five major killer diseases- diphtheria, pertussis, tetanus, hepatitis B and hemophilus influenza type B (Hib). This pentavalent vaccine has been introduced in almost all the GAVI eligible countries by 2011 [9,10] and it was launched in Punjab on 7th January 2015. [11]

Method: Focussed group discussion was conducted with mothers in six areas i.e. Mustafabad, Ranjit Avenue, Kaler, Bhakna Kalan, Lopoke and Majitha. One group was chosen from each area comprising of 8-12 members with duration of each discussion lasting for about 45 minutes to one hour. Framed questions were introduced to the participants. A total of 52 mothers were interviewed.

Results: Majority of the mothers i.e. 41 mothers (78.9%) had no knowledge about the pentavalent vaccine while only 11 mothers (21.1%) had just heard. Majority of the source of information was provided by ANM's and ASHA workers, accounted for 13%, whereas the Immunization cards counted for 6% and Doctors contributed only 4%. Only 12% of the mothers were told that their child would be administered a new vaccine. Out of all, only 8 mothers knew that fever could be one of the side effects. 85% of the mothers had no knowledge regarding side effects of the pentavalent vaccine. 69% felt that vaccine would come in handy as only one prick or injection would be require for providing immunity against the five killer diseases. On the other hand 31% still confused and did not comment anything. 94% of mothers had developed a positive attitude for pentavalent vaccine where 6% of the mother again did not want to comment anything. 40 mothers (77%) wanted to recommend others to get their child vaccinated. Not even a single mother complaint of any barrier related to the routine immunization sessions in all the selected areas where the study was conducted.

Conclusion: On inclusion of pentavalent vaccine in the National Immunization schedule, it becomes a vital part of the government's policy to train health care workers for community mobilization. Continuous and sincere efforts are needed by the government so as to form a comprehensive strategy in order to bring effective changes in the attitude and knowledge of mothers regarding the use of pentavalent vaccine.

Keywords: Pentavalent vaccine, Perception, Attitude, Haemophilus Influenza type B, Mothers, GAVI

INTRODUCTION

India is a developing country with a population of almost 135.26 crores and high

infant and under 5 mortality rate of 34 and 45 per 1000 live births respectively. [1,2]

Immunization is considered as one of the most important public health

interventions and also a cost effective strategy to control the vaccine preventable diseases especially in children. Complete immunization coverage in India has increased from 43.5% in 2005 to nearly 63.9% in 2016 but still this improvement is not upto acceptable levels. [3,4] India still accounts for the largest number of children which are not immunized i.e. 7.4 million. [5]

The advent of combination vaccines significantly reduced the volume of the immunization activities by reducing the number of injections, amount of pain and also the cumulative exposure to preservatives and stabilizers which may contribute to various and severe adverse effects. In addition, it has facilitated incorporation of additional vaccines into immunization schedule thereby promoting higher immunization coverage. [6,7]

Pentavalent vaccine protects against five major killer diseases- diphtheria, pertussis, tetanus, hepatitis B and hemophilus influenza type B (Hib). In 2001, GAVI (Global Alliance for Vaccine and Immunization) started supporting pentavalent vaccine in order to boost the low uptake of Hep.B and Hib vaccines in low income countries by making them part of routine immunization programmes. [8] This five-in-one pentavalent vaccine has been introduced in almost all the GAVI eligible countries by 2011 [9,10] and it was launched in Punjab on 7th January 2015. [11]

Pentavalent vaccine coverage in GAVI supported countries increased from 1% in 2000 to 81% in 2018. By the end of the year, more than 467 million children have been immunized with GAVI funded pentavalent vaccines. [8] This pentavalent vaccine provides a golden opportunity to curb Hib and Hep.B along with DPT in developing countries.

Hemophilus influenza type B (Hib) is a bacterium which causes serious diseases often life-threatening illnesses in young children particularly infants. Hib can cause meningitis as well as severe pneumonia leading to an estimate of 8.1 million cases of serious illness and 363000 deaths each

year in HIV negative children under 5 years of age. [12] Hepatitis B infection in children results in significant mortality and morbidity later in life.

Pneumonia is the single largest cause of death in children worldwide. Every year, pneumonia kills an estimated 1.4 million children under the age of five years, accounting for 18% of all deaths of children under five years old worldwide. [13] In India, approximately 19% of under-five death are due to pneumonia and India accounts for almost 40% of worldwide childhood pneumonia cases. A study conducted in India, concluded that the case fatality rate of Hib meningitis was 11%. [14]

According to a study conducted in order to ascertain the uptake of newer vaccines in under five children through house to house survey. It concluded that out of 1031 children from urban population; more than 40% got immunized with newer vaccines. Maximum coverage was seen for hepatitis B i.e. 44.7% for three doses followed by immunization against Hib (27.8%). [15]

In India, a large proportion of children are at a higher risk either due to increasing resistance to antibiotics or due to limited access to health care facilities. The use of pentavalent vaccine automatically raises the coverage level of Hep.B and Hib vaccines. If these vaccines are provided individually then the coverage level of Hep.B and Hib vaccine usually lags behind DPT coverage. This gap can only be filled up by using pentavalent vaccine in routine immunization programs. It will help India in combating a large but preventable burden of Hib as well as Hepatitis and also helps in reducing child mortality.

A lot of efforts will be needed while introducing any new vaccine into the community for disseminating the knowledge and also for getting their cooperation for appropriate compliance. [16] Perception of the people and their attitude towards any new vaccine plays an important role in acceptance of that strategy. This study was planned in order to assess the mother's

perception and attitude towards pentavalent vaccine.

OBJECTIVES

1. To assess the perception and attitude of mothers regarding the pentavalent vaccine.
2. To assess the role of health care providers in modifying the attitude of the mothers.
3. To identify the barriers to getting immunized in routine services.

MATERIALS AND METHODS

As the city Amritsar has total of 44 institutions covering the district hospital to the rural hospital. [17] Areas for data collection were selected through convenience sampling method by the researcher. Focussed group discussion was conducted with mothers in urban area covered by the urban health center located at Mustafabad and Ranjit Avenue, rural area covered by rural hospital at Kaler and Bhakna Kalan, also the community health center at Lopoke and Majitha.

One group was chosen from each area comprising of 8-12 members with duration of each discussion lasting for about 45 minutes to one hour. Framed questions were introduced to the participants by the moderator in the form of discussion method. Informed verbal consents were obtained from all the participants after explaining the purpose of the study.

Unit of the study

Mothers of the beneficiary children.

Inclusion criteria

Mothers of the under-5 children who are going for the pentavalent vaccination for second time.

Exclusion criteria

Mothers who are uncooperative and not willing to participate in the study.

Statistical analysis

Data collected was then statistically analyzed both by manual method as well as

with the help of MS Excel and SPSS for calculating the frequency and percentage.

RESULTS

A total of 52 mothers participated in focused group discussion in six groups chosen from Mustafabad, Ranjit Avenue, Kaler, Bhakna Kalan, Lopoke and Majitha. According to the result findings of this study, a very large number of mothers i.e. 41 mothers (78.9%) had no knowledge about the pentavalent vaccine while only 11 mothers (21.1%) had just heard about the pentavalent vaccine. The same can be illustrated in the pie diagram given below (Figure 1).

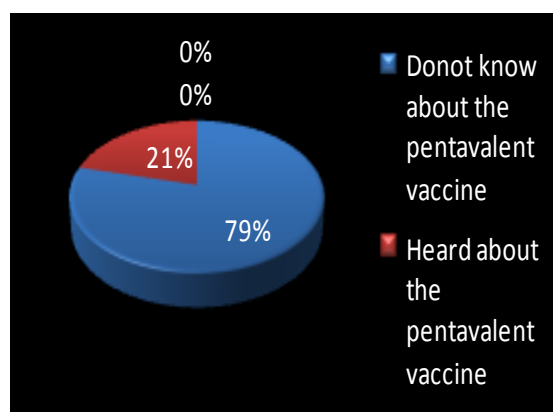


Figure 1: Knowledge regarding pentavalent vaccine among mothers

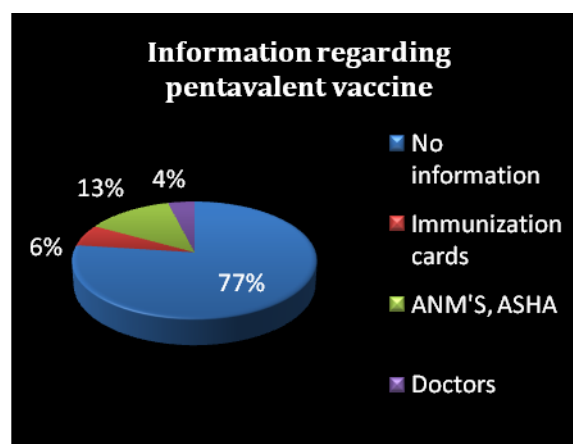


Figure 2: Source of information regarding pentavalent vaccine

Majority of the source of information regarding pentavalent vaccine was provided by ANM's and ASHA workers, accounted for 13% (i.e. 7 out of 52 mothers). Whereas the Immunization cards counted for 6% and

Doctors present at various health care centres considered to contribute for only 4% in providing the information regarding the pentavalent vaccine. (Figure 2)

In the view of imparting information regarding the pentavalent vaccine to all mothers, health care worker played a very poor role. Only 12% of the mothers were told that their child would be administered a new vaccine but the mothers were neither being told about the components of the new vaccine nor the side effects of the vaccine administered. Out of all, only 8 mothers (15%) knew that fever could be one of the side effects of pentavalent vaccine as is the case occurs with most other vaccines. 85% of the mothers had no knowledge regarding the whatsoever side effects of the pentavalent vaccine. (Figure 3)

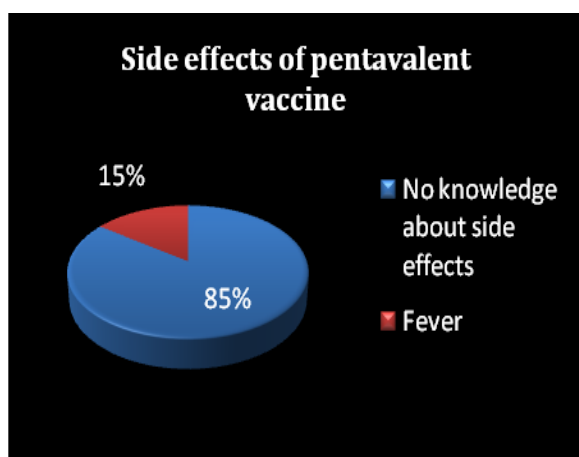


Figure 3: Side effects of pentavalent vaccine

After imparting the basic information about the vaccine by the investigators to the mothers, asked about the benefits of this vaccine. Majority of the mothers i.e. 69% (36 mothers) felt that the pentavalent vaccine would come in handy as only one prick or injection would be require for providing immunity against the five killer diseases. On the other hand 31% (16 mothers) still confused and did not comment anything regarding the administration of pentavalent vaccine even after being informed about the same.

Moreover 94% of mothers had develop a positive attitude regarding getting their child vaccinated with pentavalent

vaccine where 6% of the mother again did not want to comment anything regarding this. Majority of the mothers i.e. 40 mothers (77%) wanted to recommend others to get their child vaccinated before being provided with any information regarding the pentavalent vaccine.

When asked about the difficulties faced during the routine immunization sessions, not even a single mother complaint of any barrier related to the routine immunization sessions in all the selected areas where the study was conducted.

DISCUSSION

Though the pentavalent vaccine introduced in place of DPT and Hep.B which is being given previously, is administered by the health care workers in almost all the health care centres of Punjab.

In the present study, it was found that majority of the mothers i.e. 78.9% do not even heard about the pentavalent vaccine and only 21.1% have got some information regarding the pentavalent vaccine. The study findings were similar to a study conducted by (Selvaraj et al 2015)^[16] among mothers of under-five children stated that in the post-introduction phase of pentavalent vaccine, totally 36.7% of the mothers were aware of pentavalent vaccine and only 6% of mothers had got the idea of disease prevented by it.

Another study conducted by (Wang 2007)^[18] to evaluate the status of mother's knowledge and attitude on childhood immunization. The results indicated were similar to the present result findings that majority of the mother's knowledge and attitude regarding childhood immunization were at a low level.

One more study was conducted in which focused group discussions was conducted by the change projects on mothers so as to find out the attitude of mothers regarding pentavalent vaccine in the Dominican Republic, almost all mothers liked the idea of getting more protection with less effort.^[19] This study findings were similar to the present findings as after being

told about the usefulness and ease of the newer combination vaccine, mothers had positive attitude about getting their children vaccinated and also for recommending to others.

The source of information in the present study regarding pentavalent immunization was mainly by the ANM's and ASHA workers, whereas immunization cards and doctors were providing less information which they have to provide. This study finding is contradictory to the findings of the study conducted by (Heininger, 2006) [20] where doctors were the major source of information regarding the childhood vaccination.

CONCLUSION

Although a major portion of the population understands the significance of the immunization yet they are lacking in some basic information about the pentavalent vaccine and its role in achieving maximum immunization coverage.

On inclusion of pentavalent vaccine in the National Immunization schedule, it becomes a vital part of the government's policy to train health care workers for community mobilization in order to achieve maximum coverage for the new vaccine and also for the rest of the vaccines.

Continuous and sincere efforts are needed by the government so as to form a comprehensive strategy in order to bring effective changes in the attitude and knowledge of mothers regarding the use of pentavalent vaccine in the routine immunization program. This study findings shows that not much is being done in order to disseminate the information to the community and to motivate them which needs to be done to bring out maximum number of children under the ambit of vaccination.

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