Student Section

KAP on Adult Immunization among Medical Students

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ABSTRACT

Introduction: The changing lifestyle, demographics, and significant increase in life expectancy has brought up the concept of adult immunization. The aim of this study was to assess the knowledge, attitude, and practice on adult immunization among medical students.

Methodology: A cross sectional study was conducted among all 2nd and 3rd year MBBS students. A pretested questionnaire was given which constituted questions related to knowledge, attitude, and practice of adult immunization.

Results: About two thirds of the participants were aware of the concept of adult immunization. Only 12% students in 2nd year and 16% in 3rd year knew about the adult immunization schedule. None of the students of 2nd year and only 26% in 3rd year were aware about the vaccines used in the adult immunization. All the students agreed that adult immunization is useful for the population and it should be done. They were also not vaccinated with respective vaccines and their booster doses and only 10% in 3rd year were immunized with one vaccine.

Conclusion: Lack of knowledge and practice was clearly observed among medical students, although knowledge and practice were better among students of 3rd year as compared to 2nd year medical students.

INTRODUCTION

Immunization is the process or the act of making individuals immune and is usually done during childhood. The prevention is not only relevant for children and infants but for adults too.[1] In adult population because of the changing lifestyle, demographics, and significant increase in life expectancy, the concept of adult immunization was thought of. The administration of immunization has to follow certain guidelines towards patient, type of vaccine, route, site, and dose of administration.[2,3] Surveys and data on adult immunization are still scarce. The approach to adult immunization is through raising awareness among public and professionals. The vaccines included in adult immunization schedule by CDC (Centre for Disease Control and Prevention)[3] (Figure1) prevent from deadly diseases like cervical cancers, swine flu, *Hepatitis B*, and pneumococcal infections. These vaccines have a preventive role for medical students also since they are occupationally vulnerable to these diseases.[4,5] The aim of the study was to assess the knowledge, attitude, and practice among medical students.

METHODS

This cross sectional study was conducted among all (N=200) undergraduate medical students of 2nd and 3rd year of the concerned medical college. The study duration was of two months. A prestructured, pretested questionnaire was used which included questions related to knowledge, attitude, and practice on adult immunization and knowledge related to *HPV*, pneumococcal, swine flu, and *Hepatitis B* vaccine. There is a lack of consensus regarding the optimal strategy for adult immunization.[6-8] The adult immunization schedule given by CDC [3] and used in this study is given in Figure 1.

Ethical approval was taken from institutional ethics committee prior to the study. Participants were explained about the various terminologies that had been included in the questionnaire and then were administered with questionnaire. Statistical analysis was done using Microsoft Excel in the form of percentage, contingency tables, and tests of significance. All tests were analyzed at significance level of 0.05.

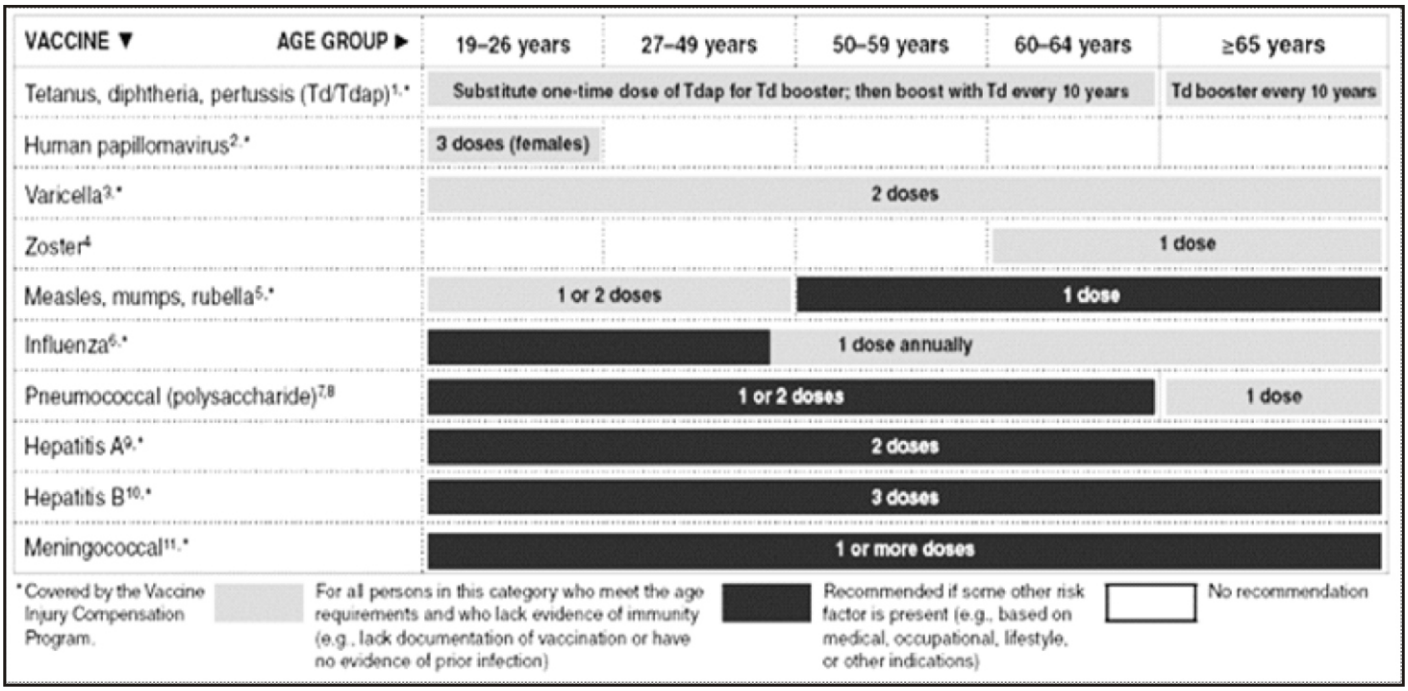

Figure 1: Adult immunization schedule by CDC.[3]

RESULTS

Among the total 200 medical students, 100 each belonged to 2nd year and 3rd year, respectively. Student's awareness about concept of immunization, schedule of immunization, and awareness about *Hepatitis B*, *HPV*, swine flu vaccine are given in table 1. Regarding the practice of adult immunization among second year students, none were vaccinated for any adult vaccines, however, in third year 10 students were vaccinated against *Hepatitis B* and this difference was found to be statistically highly significant (p value 0.0001).

Students of both the years agreed that adult immunization is useful for the population, i.e. the attitude for adult immunization was 100% positive but students of 2nd year had no idea about the adult vaccines, so the knowledge was nil (0%) while 26% students of 3rd year were aware of adult vaccines (Table, Figure 2).

DISCUSSION

Undergraduate medical students are not proficiently aware of the adult immunization. About two third of the students were aware of the concept of adult immunization, only about 15% were aware of the existence of adult immunization schedule. In the study population of 200, only 28% students were aware that vaccine for cervical cancers is used for women. When compared to a similar study on KAP on adult immunization among doctors in Ahmedabad city, Gujarat, in 2018[9], 18% resident doctors were aware about the *HPV* vaccine; increased awareness with progression of career can be a cause.

When asked for *Hepatitis B* vaccine, only 9% students were aware that it is useful for the population, when compared to a similar study on KAP of adult immunization among doctors in Ahmedabad city, Gujarat[9], 82.4% resident doctors were aware of the vaccine. This is clearly much more than our study results on the undergraduate students of a medical college; it might be because they are not in much contact with the patients as compared to the resident doctors.

43% of 30 students who knew about *HPV* as a vaccine given to women for cervical cancer were boys whereas the rest 57% were girls in the 3rd year. When compared to a similar study on *HPV* vaccine among college students in India in 2016,[10] of the total 1580 students, girls had more knowledge (44%) about *HPV* vaccine as compared to boys (31%).

Being a medical student gives a slight edge of the basic understanding of the concept but still the attitude of the medical undergraduate students is extremely casual when it comes to the practice as they were themselves not

Table: Distribution of study population regarding their knowledge, attitude, and practice of adult immunization

	2nd year (%)	3rd year (%)	Total (%)	p value
Awareness of the concept of adult immunization	61	64	62.5	0.6621
Awareness of existence of adult immunisation schedule	12	19	15.5	0.1725
Awareness of vaccines of adult immunization	0	26	13	< 0.0001
Undergone adult immunisation	0	10	5	0.0012
Awareness of *Hepatitis B* vaccine	4	14	9	0.013
Awareness of *HPV* vaccine	26	30	28	0.53
Awareness of swine flu vaccine	4	11	7.5	0.06

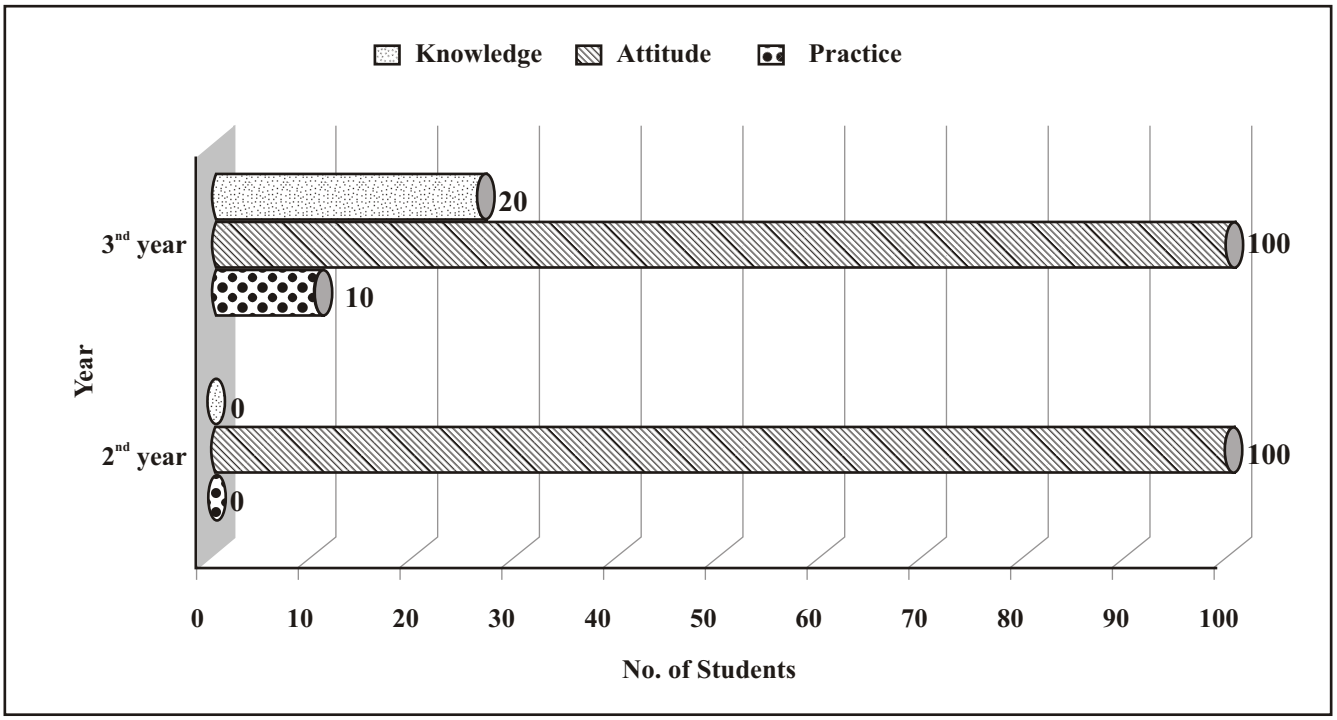

Figure 2: Comparison of KAP on adult immunization among 2nd and 3rd year medical students.

vaccinated. Unfortunately, not much studies have been conducted on adult immunization in India.

CONCLUSION

Undergraduate medical students are aware of the concept of adult immunization but awareness about the vaccines and their schedule is far lacking. Awareness of the vaccines and practice of adult immunization was higher in 3rd year students as compared to 2nd year students. Thus, lot of awareness has to be created among this group because in future they will be the leading doctors of our country.

Major limitation of the study is that sample size is very small. The study participants were restricted to two batches of MBBS undergraduate students because of time constraints and feasibility issues as it was a University short term student scholarship project.

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