

Knowledge, Attitudes and Practices of General Practitioners in Karachi District Central about Tetanus Immunization in Adults

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Abstract

Objective: To assess the knowledge, attitude and practices of general practitioners regarding tetanus immunization in adults.

Setting: The study was conducted in District Central, Karachi.

Study Design: This was a Knowledge, Attitude and practices (KAP) survey.

Methods: From a list of 1050 general practitioners (GPs), 100 were selected through simple random sampling and interviewed through a written questionnaire.

Results: Only 25% general practitioners had adequate knowledge about pre-exposure and 13% both pre- and post-exposure tetanus immunization. All were ready to participate in any program to update their knowledge. Ninety seven percent were practicing only post-exposure immunization. In unimmunized patients with history of road side/street injury, 55% started tetanus immunization with tetanus toxoid (TT) only, 43% with Anti Tetanus Serum/Tetanus Immunoglobulin (ATS/TIG) and only 2% with both TT and ATS/TIG. Only 13% GPs advised their patients to complete three doses of tetanus toxoid after initial contact.

Conclusion: As majority of GPs had poor knowledge and incorrect practices so interventions like seminars and display of immunization protocols in the clinics are recommended (JPMA 51 :367, 2001).

Introduction

Tetanus though a vaccine preventable disease, still causes more than 50,000 deaths per year worldwide^{1,2}. As a result of improved maternal immunization with TT, approximately 725,000 cases of neonatal tetanus are prevented annually³ but still, more than 270,000 newborns and 30,000 women die of tetanus world wide⁴. Major burden of the morbidity and mortality of tetanus is shared by developing countries without a immunization program. In USA less than 60 cases of tetanus (all types i.e., neonatal, maternal and others) are reported per year⁵. Exact burden of tetanus in adult population in Pakistan is not known. More than 100 cases of tetanus in adults were reported per year to Civil Hospital Karachi, during 1995-99. Eighty one percent of these were males. (Secondary data collected by the author in June 2000 with permission from Medical Superintendent, Civil Hospital, Karachi.) In USA, all primary care offices and emergency rooms, in addition to post-exposure tetanus immunization, also provide pre-exposure tetanus immunization to nonimmunized and booster to previously immunized adult population⁵. In Pakistan Expanded Program of Immunization (EPI) provides tetanus immunization to under one-year age children and pregnant women only. While the adult males are not covered for tetanus immunization through EPI. Two doses TT coverage in pregnant women is only 51%, which is poorest in the region, as compared to Bangladesh and India where two doses coverage is 85% and 73% respectively⁶. Forty two percent children under one year of age who have not completed three doses DPT primary series of active immunization are currently at risk for tetanus. Fifty eight percent children, who have completed the three doses DPT primary series of active immunization⁶, will be at risk at tetanus in future⁵ because as a policy EPI does not provide boosters.

Emergency departments in most hospitals of Karachi, including government hospitals provide only post-exposure tetanus immunization services, which is also incomplete. As after a single dose of ATS/TT given on first contact, follow up facilities are not available for these patients to complete the primary series of active immunization.

General practitioners in Pakistan provide health care to 70-80% of the population⁷. This study was conducted to assess the knowledge, attitudes and practices of general practitioners regarding tetanus immunization in adults and to formulate the suggestions for effective and efficient utilization of general practitioners services to the population.

Materials and Methods

This was a knowledge, attitude and practices survey of qualified MBBS doctors practicing in Karachi District Central. A list of practicing doctors was compiled by combining the informations obtained from Mediguide magazine, Essa Laboratory, Mehdi Manji Laboratory, Karachi Diagnostic Laboratory, City Laboratory, Ehsanullah Laboratory and representatives of GlaxoWellcome, Bayer, Abbott and Highnoon Pharmaceutical companies. Out of a list of 1050 general practitioners, 100 were selected through simple random sampling using table of random digit. Those general practitioners who were not practicing tetanus immunization were excluded from the study. Most of them were not practicing immunization, because of the risk of anaphylactic reaction. The study was conducted through a written questionnaire after pre-testing. Daily 5 general practitioners were surveyed and survey was completed in one month. Data was transferred, cleaned and analyzed by computer using EPI-info program Version 6.0.

Knowledge

Pre-Exposure Immunization Knowledge

Five questions on pre-exposure immunization given below, were asked. If all were answered correctly then the knowledge was considered adequate. Knowledge explored were: tetanus toxoid is used for active immunization, method of administration of tetanus toxoid, dose and number of doses tetanus toxoid, required for primary series of active immunization and the interval between the doses and booster.

Post-Exposure Immunization Knowledge

Following questions on post-exposure immunization were asked and if they were correctly answered then the knowledge was considered adequate. Knowledge explored were of simultaneous administration of ATS/TIG and IT and route and method of administration of the vaccines

Attitudes

1. Attitude was categorized on rating scale.

There were 5 closed ended questions to assess the attitude. Each question had five responses, so each question had maximum five marks and a minimum one mark. A score of²¹⁻²⁵ was regarded as strongly favorable attitude.

Score of 16-20 was considered as favorable attitude, score of 6-10 was considered as unfavorable and score 5 and below was graded as strongly unfavorable attitude.

2. Attitude was considered favourable if the agreement was on the following statements:

Adults should be routinely immunized against tetanus.

Regular seminar/refresher courses regarding immunization are needed.

Immunization against tetanus is the responsibility of all inclusive of GPs.

Routine tetanus immunization in adults is neglected in our country.

Updating knowledge on adult immunization can be achieved through participation in a training program.

Practices

Practice questions included the following variables:

Whether pre-exposure or post-exposure immunization.

How general practitioners starts tetanus immunization in an unimmunized patients, with history of road side/street injury. After initial contact whether they follow the patients for completing primary series of three doses of TT.

Results

Study population comprised of 89% males of whom 68% had more than 5 years of experience. Seventy three percent were attending less than 50 patients per day:

Twenty-three percent had worked/were working in the casualty department of either a public or private hospital. Eight percent general practitioners had vaccine at their clinic and all of them had only tetanus toxoid. None of them had attended any seminar/workshop regarding adult immunization however all claimed to have read some type of medical literature.

Knowledge of General Practitioners

Only 25% GPs had knowledge about pre-exposure and 13% about both pre- and post-exposure tetanus immunization (table).

Table. Knowledge of General Practitioners on Adult Immunization.

Knowledge variable	Correct %	Incorrect %
Three doses of TT are needed in adult for primary immunization	63	27
Recommended interval between three doses	38	52
Booster requirements	25	75
Required dose of Tetanus Toxoid	76	24
ATS/TIG and TT can be given simultaneously	13	87
Methodology of giving ATS /TIG and TT at the same time	13	87
Knowledge of pre-exposure immunization	25	75
Knowledge of both pre exposure and post exposure immunization	13	87

Attitudes of General Practitioners

All general practitioners agreed that adults must be immunized against tetanus routinely and alongwith government, they are also responsible for immunizing adults against tetanus. All of them agreed to participate in any educational program to update their knowledge and improve their practices.

Practices of General Practitioners

Only 3% GPs were practicing pre-exposure immunization. Out of those 97% who were practicing post-exposure immunization following acute injury only 2% were practicing it correctly (Figure).

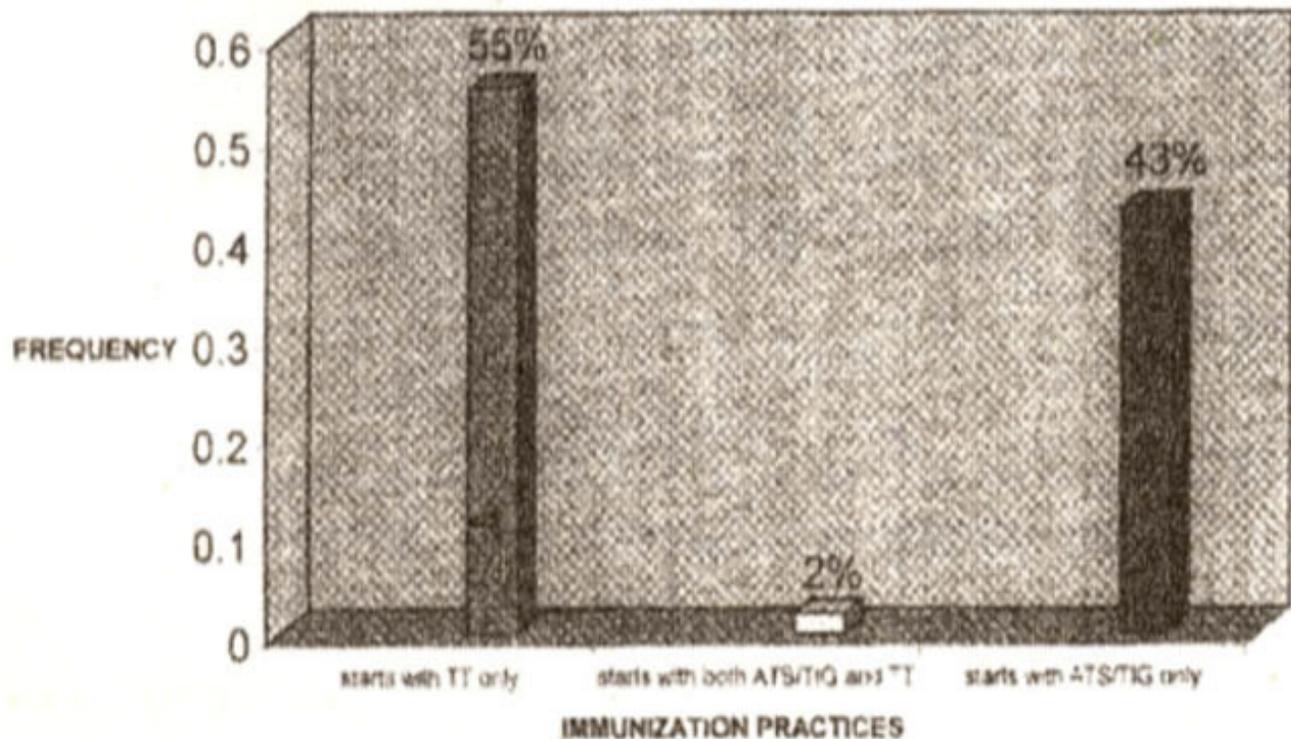


Figure. Immunized Adult Patients with History of Street/Road Side Injury General Practitioners Starts Tetanus Immunization.

After initial contact only 13% advised their patients to complete three doses of tetanus toxoid.

Discussion

In this study only 37% GPs had adequate knowledge about tetanus immunization in adults as compared to a study conducted at Trinity Hospital Kansas City, USA⁸ where 93% of the hospital residents had adequate knowledge about tetanus immunization in adults. In the present study only 2% GPs were practicing post-exposure immunization correctly which is comparable to other studies where 49% and 77% of patients treated following injury were given correct immunization respectively^{9,10}. Having only good knowledge is not sufficient to have correct practices, as 93% residents in one study had knowledge but only 5% of their patients were routinely immunized⁸. A favorable attitude and dedication is required for correct practices as evident by one of the study in which handouts given to the patients by the physician, had increased tetanus immunization rate by three fold¹¹. In similar studies elsewhere letter and computer based reminders to the patients by the physicians were found to have significantly increased the immunization rate^{12,13}.

Inadequate knowledge and poor practices of general practitioners in our setup is multifactorial. Our current health system does not provide the opportunities for general practitioners to participate in training programs launched by the government. They have been kept isolated from EPI. Furthermore, adult immunization has never been given importance in our country as evident by the fact that none of the GPs in our study had ever attended any program concerning adult immunization. Strategies are required to be developed to update the knowledge as well as to improve practices of GPs about immunization in general and tetanus immunization in particular.

Recommendations

1. Trainings and seminars should be arranged for general practitioners to update their knowledge and

improve counseling techniques.

2. General practitioners should be actively involved in EPI.

3. Display of immunization protocol in the form of posters! charts in the clinic should be encouraged. These charts/posters could be sponsored by pharmaceutical companies.

4. General practitioners should be encouraged to maintain the record of every patient receiving tetanus immunization.

5. Reminders to patient few days before due date by the family physician will help to improve the immunization rate.

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