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A STUDY TO IDENTIFY THE INFLUENCE OF OTC PRACTICE IN PAEDIATRIC POPULATION OF KERALA

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ABSTRACT

The growth of OTC products sale is rising tremendously in the world market. Most of the pharmaceutical companies are concentrated on marketing their products as over the counter drugs as it avoids all the expenses involved in the normal sale of drugs. By convention, OTC products are considered to be safe to use, devoid of any side effects. Now the trend over the use of drugs has changed that most of the people prefer OTC drugs over the normally prescribed drugs. The reasons behind this may be the lack of time, partial knowledge about the drugs and several other factors. But the most astonishing fact was the widespread use of OTC drugs in pediatrics although the use of most of the drugs is restricted in pediatrics due to safety reasons. Here in this study we made a brave attempt to evaluate whether the use of OTC drugs is safe or not in the pediatric age group. The study also aims to find out the reasons behind the use of OTC drugs, the commonly used OTC drugs, the diseases for which they are used in the given pediatric population.

Keywords: OTC, Pediatric, Pharmacist, Drugs

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INTRODUCTION

Over the counter (OTC) drugs are drugs that are available without a prescription. After many years of use under prescription regulation drugs with excellent safety records may be approved by the FDA for over the counter sale. But of late usage of OTC drugs was seems to be on the rise, which in fact may lead to possible ill effects as well as drug abuse. Consumers prefer OTC products mainly because of its easy availability without any consultation with Physician, which in fact saves the extend of time and money they would have spend to see a Physician at his clinic or at a hospital [1]. Other possible reason which leads a consumer towards OTC products are his previous experiences with the product and also his economic status.

Regarding pediatric population, the treatment patterns always require good attention, especially with drugs prescribed. The pediatric population require different doses per kilogram of body weight than adults due to difference in their pharmacokinetics, as well as pharmacodynamic factors. Premature neonates have poorly developed organ functions and are at higher risk of eliciting unexpected toxicity or poor clinical response from sub-optimal dosage regimens of drugs due to altered pharmacokinetics or dosage requirement on the population. Paediatric patients below 6 years of age may need extemporaneously prepared dosage forms, e.g. oral suspensions due to their inability to swallow tablets or capsules [2, 3]. OTC medications should not be given to babies or children younger than 3 years without consultation of the doctor because reactions and overdosing can happen either if parents do not understand the label or fail to measure the medicine correctly or when several different kinds of medicines with duplicate ingredients are given.

The Common Medications For Pediatrics Include [4-6]:

1. **Cough syrups like** dextromethorphen and/or diphenhydramine which ease coughing. Coughing can be a sign that the body is getting off the mucous that contaminates the airway and stopping this normal response can be harmful to children.
2. **Decongestants** are given to reduce swelling and stiffness in the nose which offer some relief, but can cause a fast heart beat, restlessness or insomnia.
3. **Antihistamines**, used to dry up a running nose or reduce sneezing by allergies but do not help someone with a cold.
4. **Nasal drops or sprays** contain normal saline which soften the mucous in the nose help the child breathe more easily. Nasal drops or sprays that contain drugs should not be used.
5. **Pain and fever relievers** Infants fewer than three months old with a fever should always be evaluated by a healthcare practitioner due to greater risk of serious infections. Antipyretics may be indicated when the temperature is higher than 100.4F.
6. **Antibiotics** given to the pediatrics for the treatment of respiratory tract infections and its inappropriate use has led to the development of many disease resistant strains leading to a failure in the treatment and so exact dose must be followed.

Methodology

In this study, a survey on the use of OTC drugs and their effectiveness in the 250 pediatric populations up to an age group of 5 has been conducted by structuring a questionnaire. The questionnaire was distributed to parents with in the northern region of Kerala. A conclusion was made based on the results obtained from the questionnaire

RESULTS AND DISCUSSION

As per the survey results majority of patients were between the age group of 1-5 years where as only 1% were less than 6 month old. Even though parents were using OTC products for their child/children, but they were simultaneously consulting their Physician. 80% of surveyed population was consulted to their physician by parents but these consultations were quite irregular in majority of population. Only 20% surveyed population were regularly consulted to their physician by their parents. This figure of 20% was quite astonishing for the authors since parents are more concerned about their child/ children' s health status, inspite of this normal mind set parents were not so regular in consulting with Physician when their child/children gets sick. This data enforced to look in to reason behind such a surprising practice.

The parents who were irregular in consulting with Physician were more dependent on OTC products which are freely accessible from pharmacies. These parents were more inclined towards self medication for their pediatric patients which can be a risky affair [7]. This surveyed population was less knowledgeable in drug products and its usage, but this lack of knowledge never reduces their interest in using OTC product for their child/children.

As per the survey results, major reason behind the usage of OTC products for pediatric population is lack of time to spare for taking population to Physician and also previous experience of the parent with product. Even though data is not much significant, but 5% of surveyed population had the reason of poor economic status which prevents them consulting a Physician for their child/children. This condition takes them to nearby pharmacies and takes some easily available OTC product for a try with the population. One of the major reasons which has been mentioned just above i.e. previous experience brought attention during the study (Table No.1). This previous experience is nothing but the knowledge availed by the parents when they visited earlier to a Physician for a consultation of their child/children. At the first instance it looks normal, but it was considered to be a very risky business. Without assessing the present/latest condition of the child/children the parent tend to try out the same medicament at same or altered dose, that too product purchased as OTC. The parents had lack of time due to their present day professional life, which restrict their timings for other requirements which includes taking their child/children to a Physician as soon as symptoms were observed. This lack of time along with their previous experience with similar symptomatic conditions gives them good level of confidence to try out OTC pattern of medication for their loved little champs [8, 9].

Table No.1: Reasons for preferring OTC drugs by public

Reason for OTC Drugs	Percentage
Lack of money	5%
Availability	15%
Lack of Time	40%
Experience	40%

Survey results showed that 50% of pediatric population was approached for OTC products when they had symptom of cold and fever, 30% depended up on OTC for stomach pain and about 15% tries OTC during cough. As per details gathered symptoms like cough, cold, stomach pain and mild fever is not considered as major disease condition for the surveyed population. But these symptomatic condition may look simple and silly which is prompting the parents to approach pharmacies for OTC products. This practice definitely looks dangerous and has to be avoided [10].

Table No.2: Commonly used category of products under OTC practice

Category of Medicines	Percentage
Antipyretic	40%
Cough suppressant	40%
Anticold	15%
Antibiotics	3%
Others	2%

As per the data available, around 40% of surveyed population was taking antipyretic and cough suppressants as most commonly used OTC products (Table No.2). This list of product list also includes anticold and most surprisingly antibiotics. In spite of high literacy and knowledge level in this part of the country, population was showing highest level of negligence in treatment pattern of their loved one. It was quite shocking that 3% of population even tries antibiotics as OTC products purely based on the previous experience with their product as well as symptoms. In a family with more than one child, such practices were more; they used to try antibiotics based on their experience with their eldest child. For parents it saves time and money but it may kill their joy with slightest of mistake they commit. Without having any knowledge on disease, symptoms, dosing, drug profile they try out these risky self treatment and such practices has to be curbed down at the earliest to avoid any mishaps [4, 10, 11]. One thing we should realize antibiotics are not meant to be OTC products but they too are tried freely and confidentially in this part of state.

For 50% of surveyed population pharmacist is their resource person who guides them about OTC product, 40% use their previous experience and knowledge to select their OTC products (Table No.3). Small portion of population depends up on elders as well as friend and family members advice for selecting their OTC products once symptoms are observed. In spite high percentage of pharmacist involvement in selection of OTC products, the percentage of population trying medicine in OTC practice on pediatric category is really brings attention.

Based on available data we should conclude that, even pharmacist promotes OTC practice on pediatric patients. During the interactions and observations made at local pharmacies it was easily understood that pharmacist are willingly supply products for pediatric patients when the parents approach them [12]. The pharmacist should have declined to dispense products to such category of customer, but considering the business interest they tend to forget the professional ethics, whom to blame?

Table No.3: Resources for fixing dosage for OTC products

Knowledge of dosage pattern	Percentage
Pharmacists	50%
Experience	40%
Elders	5%
Friends	4%
Others	1%

However it was found that symptoms or diseases were not cured always with the drugs purchased in OTC practice. Only 25% of surveyed population had opinion of complete cure with their try with products purchased as OTC. Majority of the population were forced to visit their Physician for further treatment. This approach made condition more complicated for them and also expensive affair too. We expect to have a role of educational qualification on his family health policy. We expect educated people to be more intelligent, but here things were exactly opposite. Results of our survey showed that majority of surveyed population who had good educational qualification were more confident on trying various drugs on their child/children without having consultation with Physician, where as the population who were not educated totally depended up on Physician for the treatment of children. The possible reason for the negligence shown by the educated class of parents was that, they had busy professional life which prevents them reaching to the Physician on time and rather force them to try out medicine in OTC. This finding can be stated as clear misuse of intelligence which a person achieves through good education. 90% of population in the study has reported of no side effects with the OTC medications with their child/children. This may be due to their unawareness of side effects or it may have gone unnoticed. But even after this usage of medicine in OTC way, population forced to depend up on Physician for curing the symptoms and disease conditions since these self treatments tend to make the conditions worst in majority of instances [13, 14].

CONCLUSION

From the study, it has been found that OTC drugs are widely used in pediatric patients of the age group above 1 yr however parents were found to be reluctant to give drugs to their children without prescription for all kinds of diseases. OTC drugs were commonly used for diseases related to respiratory tract like cough, common cold and fever and even for digestive disorders and these drugs were found to be used according to their dosing pattern. It can be concluded that the use of OTC drugs in pediatrics is prevalent even though the disease-curing rate was far less. Many parents give their children OTC drugs for the common disease due to

their lack of time to consult the pediatrician or in the belief that giving the same drug that is prescribed for adults could easily cure these diseases. When results were analysed for side effects of OTC drugs in pediatrics, it was found that they caused side effects such as drowsiness, constipation, diarrhoea etc especially with anti-cold, anti-pyretic and anti-bacterial products. But during literature review even cases of death was observed which was a quite alarming sign for us.

As per market reports the growth of OTC products sale is rising tremendously and most of the pharmaceutical companies are really concentrating on their OTC markets since it can easily fetch them fortunes without much effort. But it is yet to identify the real face of OTC usage. The reason for rise in pediatric usage of OTC products is really an alarming signal for the health sector. Time is short and it requires real hard effort to educate the community about OTC medicines and their recurrent usage in pediatric cases, so that we can avoid many tragedies, which we can expect in near future.

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