FREQUENCY OF AWARENESS IN MOTHERS ABOUT RISK FACTORS OF ASTHMA IN 1 TO 12 YEARS OLD CHILDREN

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ABSTRACT

Objective: To determine the frequency of awareness in mothers about the risk factors of asthma in children aged 1-12 years, attending pediatric department, Combined Military Hospital, Quetta.

Study Design: Descriptive, cross sectional study.

Place and Duration of Study: The study was conducted at department of Pediatrics, Combined Military Hospital Quetta. Duration of the study was six months from Oct 2011 to Apr 2012.

Material and Methods: All the mothers of children with asthma were selected for this study. Informed consent was taken from all the patient's parents participated in the study. Every patient was assigned a serial number. Detailed history about risk factors was taken by the researcher and all the information entered in the proforma and collected data was analyzed by SPSS version 22.

Results: Total 150 mothers were included in study. There were 9 (6.0%) mothers who had awareness of any relation between breast feed and the risk of asthma in children, 15 (10%) mother had awareness of relation between pet animals / birds and the risk of asthma in children, 3 (2%) mothers had awareness of relation between carpets at home and the risk of asthma, 24 (16%) mothers had awareness of relation between cigarette smoke and the risk of asthma in children. There were 15 (10%) mothers who had awareness about relation between food and the risk of asthma, 3 (2%) mother had awareness of relation between repeated use of medicines in children under six months of age and the risk of asthma, 5 (3.3%) mothers had awareness of relation between the use of pillows and the risk of asthma, 3 (2%) mothers had awareness of relation between the presence of cockroaches in child's bedroom and the risk of asthma in children.

Conclusion: In Quetta region, mothers had lower frequency of awareness among mothers regarding pediatric (1-12 years) asthma development and its associated risk factors.

Keywords: Asthma, Awareness of mothers, Breast-feed, Carpets at child's bed room, Pet animal / birds, Risk factors, Smoking

INTRODUCTION

Asthma is one of the most prevalent chronic disorders and the most frequent cause of hospitalization among children[1]. Public attention in the world has been focused on asthma because of its increasing prevalence between 1960 and 2008[2]. According to the global initiative for asthma, prevalence of asthma in Pakistan is 4-5%[3]. Studies have shown that social and environmental factors may affect asthma prevalence, like lack of exclusive breast feeding, delivery by caesarean section, use of antibiotics, cockroaches at home and use of feather pillows have been found to increase the prevalence of asthma[4,5]. A study at Isra University, Hyderabad, about modifiable risk factors of asthma revealed that most of the asthmatic children lived in urban areas, had exposure to tobacco smoke at home, were weaned earlier than non asthmatics, were living in covered houses, had pets and carpets at home[6]. Moreover, the increase in knowledge regarding prevention of childhood asthma is associated with family careers. There is need to implement educational and behavioral interventions for reduction in prevalence of childhood asthma at primary level[7-9]. A study conducted at Saudi Arabia to know awareness of risk factors

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among mothers of asthmatic children revealed that 94% were aware of common cold, 82% weather changes, 43% dust, 29% smoke, 19.3% food, 11% muscular exercise and 4.7% were aware of psychological factors[10,11]. No such study, has been conducted in Balochistan till now. The purpose of this study is to determine the level of awareness among mothers of asthmatic children about modifiable risk factors in Quetta. If the awareness of mothers about the risk factors is found to be low, they can be educated about primary prevention of asthma and give better care to their children in this remote area, by avoiding the risk factors.

MATERIAL AND METHODS

A descriptive cross sectional study was carried out for the time period of six months (6th October 2011 to 5th April 2012) at Department of Pediatrics, Combined Military Hospital, Quetta. Sample size of 150 participants (mothers of diagnosed cases of asthma that fulfilled the inclusion criteria) with 11% prevalence 12, 5% margin of error and 95% confidence interval was calculated by using WHO sample size calculator. Non probability consecutive sampling was used for recruitment of participants. All the mothers of children with asthma reporting to Pediatrics Department (both indoor and outdoor), Combined Military Hospital Quetta were taken as subjects of the study. The mothers of children (1-12 years age) diagnosed of asthma (as pediatric department attends patients upto 12 years of age in CMH Quetta), only house wives, mothers having at least primary level of education (5th class), resident of Quetta district (rural areas only) were included in study. Mothers of working class, resident of urban area, mothers working as medical or paramedical staff member were excluded from study to avoid biases. Ethical approval was taken from ethical review board of CMH hospital. Informed consent was taken from all participating mothers. Every patient was assigned a serial number. Bias was eliminated by following the exclusion criteria. Detailed history was taken by the researcher and all the information entered in the proforma and collected data was analyzed by SPSS version 22. Descriptive statistics (percentages, mean, SD) was used to describe the data. Results were reported in percentages for different variables according to nature of variable

RESULTS

Total 150 mothers were included in study. The mean age of mothers was 29.5 ± 5.6 years. There were 50 (33.3%) mothers in the age range of 20-25 years, 37 (24.7%) mothers in the age range of 26-30 years, 35 (23.3%) mothers in the age range of 31-35 years and 28 (18.7%) mothers in the age range of 36-40 years. There were 9 (6.0%) mothers who had awareness of any relation between breast feed and the risk of asthma in children, 8 (5.3%) mothers had awareness about breast feed decrease the risk of asthma in children and 8 (5.3%) mothers had awareness about exclusive breast feed given up to what age will reduce the risk of childhood asthma. There were 15 (10%) mothers who had awareness of any relation between pet animals/birds and the risk of asthma in children, 15 (10%) mothers had awareness about dog/cat/birds have relation with the risk of asthma in children, 15 (10%) mothers had awareness about pets / birds increase or decrease the risk of asthma in children and 15 (10%) mothers had awareness about pets/birds increase the risk of asthma when the children hold/play with them or even their presence at home increase the risk. There were 3 (2%) mothers who had awareness about relation between carpets at home and the risk of asthma in children, 3(2%) mothers had awareness about carpets increase or decrease the risk of asthma in children, 3(2%) mothers had awareness about carpet at child's bedroom affected more and 3(2%) mothers had awareness about risk of asthma increase just with the presence of carpet in bedroom or when the child will play/sleep over it. Frequency of awareness related to cigarette smoking and asthma development in children is shown in table-I. There was no mother who had awareness about relation between delivery by caesarean section and risk of asthma in children. There was no mother who had

awareness about relation between early start of weaning and risk of asthma in children. There were 15 (10%) mothers who had awareness about relation between food and the risk of asthma in children, 15 (10%) mothers had awareness about eggs/peanuts have relation with the risk of asthma in children and 15 (10%) mothers had awareness about foot items increase or decrease the risk of asthma in children. There were 3 (2%) mothers who had awareness about relation between repeated use of medicines in children under six months of age and the risk of asthma, 3 (2%) mothers had awareness about paracetamol/ antibiotics/any other types of medicines have relation with the risk of asthma and 3 (2%) mothers had awareness about repeated use of antibiotics in children under six months of age, increase or decrease the risk of asthma. Frequency of awareness in mothers related to association between, cockroach, pillows and asthma development in children is shown in table-II.

Table-I: Frequency of awareness related to cigarette smoking and childhood asthma.

Question	Answer	Percentage
There is relation between parents cigarette smoking and risk of asthma in children	Yes	24 (16%)
	No	126 (84%)
Cigarette smoking can increase risk of asthma development in children	Yes	23 (15.3%)
	No	127 (84.6%)
Smoking at bed room could affect more a child in terms of asthma development as compared to other places at home	Yes	23 (15.3%)
	No	127 (84.6%)

Table-II: Frequency of awareness related to association between cockroach, pillows and risk of asthma development in children.

Questions	Answers	Percentage
There is relationship between use of pillows and asthma development in children	Yes	5 (3.3%)
	No	145 (96.7%)
Pillows filled with feathers/ polyester could had relation with asthma development in children	Yes	5 (3.3%)
	No	145 (96.7%)
Pillows filled with feathers could increase risk of asthma in children	Yes	5 (3.3%)
	No	145 (96.7%)
Presence of cockroaches have any relation with asthma development in children	Yes	3 (2%)
	No	147 (98%)
Presence of cockroach cold increase risk of asthma in Children	Yes	3 (2%)
	No	147 (98%)

DISCUSSION

The results of the present study highlight some deficiencies in mothers' knowledge about asthma. This might be explained by the lack of availability of structured health education programmes designed for asthmatic patients and their families. Physicians generally do not give a high priority in their practice to the tasks of patient education, development of self-management skills and assumption of an appropriate degree of responsibility for paediatric asthma care because these require a substantial commitment of time and effort[12,13]. Regarding mothers' actions for managing their child's asthma, the great majority responded by giving medications and going to the physician. The great majority of mothers said they sought help from the doctor or other social support during their child's asthma attacks. This can be due to the chronic and unpredictable nature of asthma attacks. The action least mentioned by mothers for managing asthmatic attacks was breathing exercises. This points to mothers' ignorance of the importance of breathing exercises, presumably because local doctors had not educated them about such exercises and how to perform them, or to an inability of the children to practice them. These exercises, if practiced regularly, help to strengthen the respiratory

muscles and reverse the conditions which aggravate asthma attacks[14]. The present study showed that there was a significant relationship between mothers' knowledge of asthma and their asthma management behavior. The reasons for parental noncompliance with asthma care are complex and involve psychological, social and cultural factors. An important contributory factor, however, may be inadequate parental knowledge of asthma management techniques[15]. As our knowledge about the risk factors and means of preventing asthma increases, there is likely to be a greater focus on the behavior and practices of family carers. These will require the development of educational and behavioral interventions to translate new knowledge regarding primary prevention into actual reductions in asthma prevalence[16,17] . In our study 10% mothers had awareness of relation between pet animals/ birds and the risk of asthma in children. As compared with the study in which 5.5% mothers had awareness about pet animals / birds and risk of asthma in children, which is comparable with our study[18]. In our study 2% mothers had awareness about relation between carpets at home and the risk of asthma in children. As compared with the study in which 7% mothers had awareness about carpets at home and risk of asthma in children[19]. In our study 16% mothers had awareness about relation between cigarette smoke and the risk of asthma in children. As compared with the study of Harbi *et al*[20] 29% mothers had awareness about relation between cigarette some and the risk of asthma in children. In another study conducted by Tavacol *et al*[21] 9% mothers had awareness about smoke and risk of asthma in children. In our study 10% mothers had awareness about relation between food and the risk of asthma in children. As compared with to a study in which 19.3% mothers had awareness about relation between food and the risk of asthma in children[22]. In our study 2% mothers had awareness about relation between repeated uses of medicines in children under six months of age and the risk of asthma. Evidence exist that 4% mothers had awareness about repeated use of medicine and risk of asthma in children[21]. On the above discussion, it is suggested that more education is needed in this region to help the mothers of asthmatic children acquire the necessary knowledge and practices to care for their children.

CONCLUSION

In Quetta region, mothers had lower frequency of awareness among mothers regarding pediatric (1-12 years) asthma development and its associated risk factors.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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