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Original Research Article

Knowledge, attitude and practice of fever and febrile illness among parents of under five children

Achinta K.R. Mallick*, Shalu S. Kumar, Janki Bangari, Himani Suyal

Department of Pediatrics, Military Hospital Kirkee, Range Hills, Pune, Maharashtra, India

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***Correspondence:**
Dr. Achinta KR Mallick,
E-mail: achinta.mallick@gmail.com

ABSTRACT

Background: Fever in children is the commonest cause for outpatient and inpatient admissions in the health care setup. Though most fever episodes are benign with self-limiting course, it is often a reason for anxiety and concerning for parents. The aim of the study was to assess the parental knowledge, attitude and practice regarding fever in children under five years of age.
Methods: A cross-sectional question based survey, conducted in the pediatric department of a peripheral hospital in Pune, Maharashtra from parents of under five children, presenting for any consultation from July 2018 to December 2018.
Results: There were 636 respondents who completed the study. 38.1% were males. Mean age of responders was 26.85 years (SD 5.12 Range 18 to 37 years). Most of the population were educated lot. 55.5% responders defined fever correctly. There was a huge gap in the parent's knowledge attitude and practice in fever and it's management. Lack of information and fear of any untoward incident occurring due to fever were the reason for parental anxiety, frequent medication & combination antipyretic use, and pressure on part of health professionals to increase antibiotic prescriptions.
Conclusions: Lack of parental knowledge of fever and fever management in younger children is of concern in the community in spite of improvement in the educational level of parents. There is a utmost need to spread awareness in the community about the benign and the self-limiting nature of most febrile illnesses.

Keywords: Attitude, fever, Knowledge, Practice, Young children

INTRODUCTION

Fever in children is the commonest cause for parents seeking primary consultation to health care setup.[1,2] Younger children tend to suffer more episodes of febrile illnesses leading to more frequent physician consultations compared to the children of the older age group. Acute febrile illness is also one of the commonest cause of hospital admissions in the children. Most children presenting with fever are diagnosed with short lived, self-limiting viral or non-complicated, milder forms of bacterial illness, which can be managed at home by the primary care giver with supportive care measures and by imparting adequate knowledge to identify the early warning signs and follow up advice. But often, there is ignorance and fear on the part of the parents regarding fever in younger children leading to their repeated consultations, sometimes with different physician, within the same febrile illness episode. This may happen especially in case, the fever persists for a longer duration of time.[3] Acute viral febrile illness generally presents with a sudden peaking of temperature, without any

localizing signs, which may sometimes persist for 3 to 4 days and gradually resolves by 7 days. In such a scenario, adequate rest and hydration, along with antipyretics form the mainstay of therapy, and they are generally self-limiting. However it often leads to fear on the part of the parents, compelling them for repeated consultations. The main reason for re-consultation may be attributed to the lack of knowledge among parents or caregivers, parental anxiety and fear of occurrence of any untoward event to their child, due to fever. Many a times, it may lead to patient dissatisfaction with the health care setup. The patient anxiety and dissatisfaction may sometimes be severe enough to compel the primary care physician to practice irrational prescription of antipyretic combinations as well as antibiotics. This may also lead to increased hospital admissions thereby increasing the burden and cost to the health care setup.[4-6] Though the knowledge among parents regarding fever and home remedial measure in management of acute febrile illness in younger children may be lacking, there are a very few studies evaluating the parenteral knowledge and fear related to fever and its management in children. Based on this assumption that the parental knowledge about fever may be lacking, an attempt was made to evaluate the knowledge, attitude and practice (KAP) about fever, among parents of under five children by question based survey, presenting to the pediatric OPD of a peripheral hospital in Pune, Maharashtra.

METHODS

A cross-sectional question based survey was conducted in the pediatric department of a peripheral hospital in Pune, Maharashtra from parents of under five children, presenting for any consultation from July 2018 to December 2018. All patients belonged to the same socioeconomic status as our hospital being a service hospital. Questions were formulated in three domains namely knowledge, attitude and practice among parents about fever from previous scientific publications. A pilot study was conducted initially among 50 parents to assess their feasibility of understanding and answering the questionnaire, and based on the feedback received, the language and wordings of the questions were changed to make more user friendly. 21 questions with response option of Yes/no, agree/disagree and Likert Scales were used as appropriate for each question. The responses were entered in excel sheet and analysis was based on simple descriptive statistics with frequency and percentage as applicable. A review of the existing literature suggested a sample size of > 600 parents to be sufficient to generalize the response with the population.[7, 8] Anticipating 10% population will not complete the survey it was proposed to include 660 parents for the survey. Informed consent was taken prior from parents before participation. All parents reporting to pediatric OPD with children having fever, and consenting for the study were included in the study. Parents refusing consent were excluded from the study. The parents were neither given any monetary assistance for participation nor was the study funded by any agency. The study was approved by the institutional ethical committee.

RESULTS

A total of 636 parents completed the survey questionnaire. 38.1% respondents were male. The mean age of parents was 26.85 years (SD 5.12 Range 18 to 37 years). The demographic information of the parents is illustrated in table 1.

Table 1: Demographic characteristics of responders (Total respondents = 636).

Baseline Characteristics[a]	% (n)
Mean age of responders in Years (+/- SD)	26.85 (5.12)
Male	38.1% (242)
Parity	
1child	40.7% (259)
>1child	59.3% (377)
Education level	
Secondary level	26.1% (166)
Higher secondary	34.4% (219)
Graduation and above	39.5% (251)
Having child with previous chronic medical condition	5.2% (33)

[a] All indicate numbers unless specified

Knowledge

55.5 % respondents knew the correct definition of fever (temperature > 38 degree C). Most respondents (70.9%) believed that fever is caused by viral infection. 55.3% respondents believed that viral illness is self-limiting. Nearly everyone (97.6%) believed that paracetamol is needed to be given for fever. 69.5% respondents had belief that antibiotics is necessary for treatment of fever. 68.5% respondents believed that antibiotics are useful only in bacterial cause of fever. Only 21.4% respondents knew home remedies to control fever other than paracetamol.

Attitude

Most (98.3%) agreed to have visited a doctor for fever. 57.4% respondents agreed to have visited the emergency department in off hour services for fever. Most respondents (83.3%) believed that the discomfort caused by fever needed to be treated immediately. 70.9% respondents believed that fever if not controlled immediately may affect the health consequences. Attitude of parents towards fever causing adverse consequences to their children were dehydration 30.8%, febrile seizure 31.6%, brain damage 22.5%, danger to life 15.1% respectively. Parental expectation while visiting a physician due to fever in their child were for physical examination 18.4%, advice on identification of alarm signs and home remedy measures18.4%, reassurance

39.4%, to obtain paracetamol or antibiotics 23.8% respectively.

Practice

Only 55.9% respondents agreed to have used a thermometer to measure temperature. 44.2% perceived fever on touching forehead or body only. 46.4% respondents agreed to measure temperature very frequently in case fever is very high or doesn't subside immediately. 78.1% respondents agreed to have visited a physician within 6 hours of onset of fever. Nearly all (85.7%) respondents agreed to have given paracetamol without consultation. 21.4% parents agreed giving frequent dosing of paracetamol or combination antipyretics for fever not subsiding within a short span of time. 21.4% respondents agreed to have changed the physician in case fever did not subside within 3 days.

Many (51.2%) parents agreed trying to persuade the physician to prescribe antibiotics in case fever did not subside in 2-3 days. The details are depicted in Table 2.

Table 2: Responders response to questionnaire on knowledge, attitude and practice of fever (Total respondents = 636).

Questions	Agree% (n)	Don't agree % (n)
Knowledge		
Definition of fever temperature > 38 degree C	55.5% (353)	44.5% (283)
Fever is mostly caused by viral infection	70.9% (451)	29.1% (185)
Viral fever is self-limiting	55.3% (352)	44.7% (284)
Paracetamol should always be given in fever	97.6% (621)	2.4% (15)
Antibiotics is necessary in treatment of fever	69.5% (442)	30.5% (194)
Antibiotics are necessary only for bacterial fever	68.5% (436)	31.5% (200)
I know home remedies to control fever other than paracetamol	21.4% (136)	78.6% (500)
Attitude		
I have visited a doctor when my child had fever	98.3% (625)	1.7% (11)
I have visited a doctor in off hour service for child with fever	57.4% (365)	42.6% (271)
Wanted discomfort of fever to be treated immediately	83.3% (530)	16.7%2 (106)
Fever if not controlled immediately will affect health	70.9% (451)	29.1% (185)
Fear of adverse consequences of fever Dehydration Febrile seizure Brain damage Danger to life	 30.8% (196) 31.6% (201) 22.5% (143) 15.1% (96)	 ------
Expectation while visiting a doctor for child having fever Physical examination Identification of alarm signs and home remedy measure advice Reassurance To obtain paracetamol and antibiotics	 18.4% (117) 18.4% (117) 39.4% (251) 23.8% (151)	 -----
Practice		
Used thermometer to measure temperature	55.9% (356)	44.1% (280)
Perceived fever by touching forehead/ body only	44.2% (281)	55.8% (355)
If fever is high keep measuring temperature frequently	46.4% (295)	53.6% (341)
Visited doctor within 6 hour of fever	78.1% (497)	21.9% (139)
Gave paracetamol first dose without consultation of doctor	85.7% (545)	14.3% (91)
If fever doesn't come down then gave frequent dose or combination antipyretic	21.4% (136)	78.6% (500)
If fever didn't come down, within 2-3 days changed doctor	21.4% (136)	78.6% (500)
Asked doctor to give antibiotics for fever	51.2% (326)	48.8% (310)

DISCUSSION

The study gave more insight to the parental KAP towards fever in their children. It showed lacking to parental knowledge in exact definition and measurement of fever. The health care seeking behavior among parents was good in case of fever. Most parents visited the health care setup in off duty hours for fever. Almost all had given

paracetamol in fever before consultation. A very few parents were aware of other home remedial measures to control fever other than antipyretics. Practice of use of thermometer for measuring temperature was less. Most parents believed antibiotic to be helpful for fever. Most parents agreed to the fear of untoward consequences of fever in case it was controlled immediately. Most parents agreed having given multiple dosing of paracetamol or antipyretic combinations. A substantial population also agreed to frequent physician visits, influencing the physician to prescribe antibiotic or even changing the doctor in case fever doesn't resolve early. A substantial population had answered wrong the temperature to define fever in the survey which remains same with the existing literature.[7,9,10]. Parents still perceive fever at lower temperature and give antipyretics.[7] This may reflect the prevalence of wrong information among the population in recognizing fever even on selecting an educated population, same as observed in other study.[11] Similar to previous studies, most parents in our study were also worried about consequences of fever.[7,12-14] Similar to other studies, our study population also agreed to frequent dosing of antipyretics or use of combination antipyretics which is not recommended for fear for dosing error and toxicity.[15,16] This may also be attributable to higher education level among participants in our study, as also has been stated in previous studies.[17] Parents demonstrated a good knowledge about infection as with other study.[7] There is a need for educating the parents about the physiological nature of fever, antipyretic dosing, home remedial measures and to withhold the use of antibiotics in early fever episodes as also expressed with concern in other studies.[18,19] There is a need to provide information via counselling, media campaigns, so as to effectively reduce the parental anxiety regarding fever, desire to antibiotic use where it may not be justified.[20,21] The role of media in playing a pivotal role in achieving these goals cannot be emphasized more.

The large sample size and high response rate is one of the major strengths of our study. We included the patients when their children were actually ill so as to capture their actual behavior practices in fever. Our study represented a large population of educated parents which may not be the reality in community. This may be due to the selected population seeking health care facility in our setup. Higher health care seeking behavior among parents may also be attributed to the easy accessibility of health care setup in our services. We also agree that parents with previously affected children may give a biased response to questionnaire but their proportion was very few (5.2%).

To conclude, there is lack of knowledge and conflicting information regarding fever and febrile illness among parents of younger children. This continues to be an important public health issue in the community, as a result, the evidence based practice and protocols followed by the health care professionals in fever management are frequently misunderstood and often challenged by a proportion of patient relatives. The poor level of information and inappropriate management remains a primary concern to health care workers as they are frequently subjected to parental anxiety, repeated consultations and pressure of irrational investigation and antibiotic prescription, with unnecessary burden to the health care services. This once again emphasizes the need of various initiatives and interventions from the government and media to empower parents of disseminating correct information for care and management of children with fever or febrile illness.

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