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Fever of unknown origin caused by child abuse; A case report

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Case Report

Abstract

BACKGROUND: Fever is the most common complaint in children. Some children frequently refer to treatment centers for long periods of continuous fever; and despite precise assessments, the cause of the fever is unknown. Since there is no evidence of relationship between fever of unknown origin (FUO) and child abuse, we report a case of fever of unknown origin case caused by child abuse.

CASE REPORT: An 8-year-old boy was referred to a pediatric ward of Mehr hospital in Malayer City, west of Hamadan Province, Iran, followed by a fever of unknown origin to assess the disease. The patient repeatedly had severe fever twice a month, since he was seven years old. He did not presented to hospital due to normalization for his family. He then returned to the hospital with repetition of fever and not responding to the medications used at home. After a few days of admission to the hospital and performing examinations and laboratory procedures and pictograph, there was no finding to determine the cause of the fever. However, in the interview, child's mother secretly expresses child abuse and her harassment with the concern and fear of the child's father.

CONCLUSION: Cultural beliefs and parental power are two phenomena that prevent the use of appropriate tools for understanding stresses and bitter experiences of childhood. For these reasons, history taking and physical examination by doctors and nurses in the hospital are limited only to the physical examinations. Therefore, there is a need for laws and strong supporters who can support doctors and nurses to report child abuse.

KEYWORDS: Fever, Pyrexia, Child, Child Abuse, Child Neglect

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Introduction

Fever is the most common complaint in children. A persistent fever is confusing and disturbing in the absence of a known source. It is stressful for child, parent, and health care providers.[1] There is no comprehensive definition of fever of unknown origin (FUO). Based on the clinical signs, fever of unknown origin refers to fever above 38.3 °C (101 °F) that occurs at least once a day and lasts for more than 8 days, and a reason cannot be determined for it after admission to hospital or outpatient screening. Various definitions have been presented in various studies for fever with unknown origin, but the duration of the fever is emphasized from five days to three weeks. The fever of unknown origin may have infectious or non-infectious causes.[2]

Many studies show that stresses and bitter experience of childhood can be the cause of many physical disorders, including fever of unknown origin or other physical illnesses.[3] Other studies show that stress-induced children are more likely to develop fever than other children. Mental events and chronic stress can cause fever, too.[4] Avicenna believes that a type of fever is a result of fear that sometimes occurs. A scared person is shocked, and fever takes place because of unexpected fear. In this type of fever, spirit flows inward,

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and suddenly occur. The pulse is swirling and the eyes also show fear.[5]

In differential diagnosis of fever in children, one of the things that are neglected is called child abuse. Many studies have documented the relationship between child abuse and its physical implications. Besides, the difference in the definition of child abuse in different cultures has caused some parents to neglect the importance of child abuse and its consequences.[6]

With a review of both domestic and foreign affairs, we found no article showing the association of child abuse and frequent fever. Considering the concern of health care providers and pediatricians about the delayed consequences of diagnosing childhood fever, and the fact that child abuse may create complicated conditions alone or in combination with other factors, we aimed to report a case of fever of unknown origin caused by child abuse.

Case Report

An 8-year-old boy was referred to the pediatric ward of Mehr Hospital in Malayer City, west of Hamadan Province, Iran, with his mother following a sever fever of 39.3 °C. It was found in evaluations that the patient repeatedly had a severe fever twice a month; they were not referred to the hospital due to normalization for his family, and they controlled fever with drugs that were at home. The child studied in the second year of the primary school. His state of intelligence was normal. He spoke calm and cumbersome. He had a good social relationship and spoke in Persian.

After being admitted in the hospital, chest X-rays and ultrasound studies and blood tests were conducted (Table 1). Urinalysis, urine culture, and stool exams were all normal and negative for any disease. There were no suspicious cases in either.

Then, the mother of the child spoke secretly and with fear about cases of child abuse by family's father. The mother of the child stated that the boy and his 1.5-year-old sister were the only children of the family with a modest middle-income. Children were continued to be physically punished by father from back of the waist, abdomen, and legs without any specific reason. As far as mentioned, even his 1.5-year-old sister and his mother were not being safe from these mayhems. The child himself stated that his father beat him with a pipe. According to the explanations, it was found that the rate of child harassment had increased in recent year which had a direct correlation with the child's fever, that was, fever repetitions continued with harassment.

Table 1. Hematology and biochemistry findings

Test	Result	Test	Result
White blood cell	8600.00	Fasting blood sugar (mg/dl)	78.00
Neutrophils (%)	80.00	Blood urea nitrogen (mg/dl)	12.90
Lymphocytes (%)	16.00	Creatinine (mg/dl)	0.53
Monocytes (%)	2.00	Calcium (mg/dl)	8.90
Band cell (%)	2.00	Sodium (meq/l)	132.00
Red blood cell ($\times 10^6$)	4.23	Potassium (meq/l)	3.86
Hemoglobin (g/dl)	12.20	ESR 1st hour (mm)	38.00
Hematocrit (%)	34.50		
MCH (pg/cell)	28.80		
MCV (fl)	81.60		
MCHC (g/dl)	35.40		
Platelets	172000.00		

MCH: Mean corpuscular hemoglobin; MCV: Mean corpuscular volume; MCHC: Mean corpuscular hemoglobin concentration; ESR: Erythrocyte sedimentation rate

Vulnerable mood and low self-esteem had brought down fear and anxiety in the child. The child did not have a quiet nocturnal sleep; he jumped with a shout through the horrible nightmares. In the studies, the mother described that because of father's aggressive behavior, she could not have any support for the child. The low cultural-social level of the family and the father's personality conflicts could be the causes of child abuse or family abuse. We found that this family lived in one of the villages in the city of Malayer, where the culture of violence was widespread in this village among its people. The mother said that when she wanted her husband to behave better and pay attention to the lives of the other families with their spouse and child, his husband stated that "they are not men who are fond of their family members".

Discussion

The results of the studies indicate that there is a relationship between fever and psychological problems. A psychogenic fever is a stress-related phenomenon.[7] Some patients experience high temperatures when exposed to emotional events. The mechanism of psychogenic fever is still not fully understood. Psychosis fever does not decrease with antipyretic drugs, but fever can be reduced with psychotropic drugs that are antianxiety and sedative, or through psychotherapy and solving patients' problems.[7]

Olivier suggests that fever can arise under the mechanisms other than infection, including central nervous system and parasympathetic disease.[8] Psychological fever is complex and occurs under psychological, physiological, or endocrinological mechanisms. Generally, the increase in body temperature due to psychological stresses is a universal phenomenon; but it needs to be taken into consideration because it depends on how it is measured. It is also suggested that we refer to fever in cases of inflammation and infections. So, it is better to use the word "psychogenic hyperthermia" in the cases of response to stress.[8]

Another important component of this patient is two phenomena of parental power and culture. Handwerker showed that the child's parents should have equal power.[9] Power inequalities lead to exploitative and compulsive behaviors. Women who lack power against their spouse will open the way to violence against their spouse and their children.[9]

Moylan states that 3.3 to 10 million children are exposed to domestic violence every year. It is expressed that annually 900,000 children are being abused by parents' abusive practices.[10] Some parents engage children in interactions and play with them, but some parents look at the issue from the power aspect and consider such behaviors meaningless. In fact, cultural differences continue in some parents' beliefs, even those born and raised in one culture, and passed on to subsequent generations with different norms,[10]

Of course, what kind of behavior do you consider to be child abuse? There are different definitions in different cultures. When there are differences in cultures, there are different rules about parental behaviors, but a universal law in all cultures states that abuse of children is prohibited, such as rough disciplinary behavior.[11] Therefore, in Iran, we need laws that protect doctors and nurses, who can easily report cases of child abuse, against the parents.

Conflict of Interests

Authors have no conflict of interests.

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