ISSN (ONLINE) : 2395-695X
ISSN (PRINT) : 2395-695X
Available online at www.ijarbest.com
International Journal of Advanced Research in Biology, Engineering, Science and Technology (IJARBEST)
Vol. 2, Issue 3, March 2016

FEVER

Mrs D. Sripriya, PhD Scholar, JJT University, Rajasthan

Abstract

In children, fever is one of the most common manifestations of illness and it prompts parents to seek medical attention early. Fever is uncomfortable and children may become irritable. For every 1^0 C of temperature elevation, the body's metabolic rate increases 10% to12%, resulting in increased insensible fluid loss, increased oxygen consumption and increased stress on the cardiovascular system. Regardless of the fever's cause, the child's discomfort is the primary reason for treating a fever in a normally healthy child.

DEFINITION

Fever is defined as a body temperature greater than 38^0C (100.4^0F) rectally or 37.5^0C (99.5^0F) orally.

TYPES OF FEVER

1. Remittent fever: Elevated temperature with fluctuations but never returns to the normal.

2. Intermittent fever: Daily fever but returns to the normal.

3.Continous fever: Fluctuations of elevated temperature by $<0.3^0$ C.

PATHOGENESIS

Infections, toxins and other inducers of endogenous pyrogens activate monocytes, macrophages, endothelial cells, B lymphocytes, mesangial cells, keratinocytes, epithelial cells and glial cells to produce cytokines such as tumor necrosis factor (TNF) and interleukins IL – 1 and IL – 6. These cytokines stimulate prostaglandin (PGE_2) production in the anterior hypothalamus, which then brings about a rise in the temperature set point by activating cyclic AMP (c AMP). When this happens, signals are sent to various efferent nerves that innervate peripheral blood vessels to conserve heat. The vasoconstriction causes chills which may lead to rigors with sudden elevation of body temperature. In addition, the thermoregulatory centre sends signals to the cerebral cortex to initiate behavioural changes such as seeking a warm environment, wearing extra clothing and adopting a flexed posture. All these mechanisms act to elevate the core body temperature so that the blood bathing the neurons in the anterior hypothalamus is warm and matches the new temperature set point.

MANAGEMENT

Fever can be harmful in young children if not treated; especially in children prone to febrile seizures, in debilitated children or children with systemic infections. When treated it results in temporary improvement of child's general condition and appetite. This has a tremendous soothing effect on worried parents. Any child with a temperature > 38.5^0C (101^0F) should be treated.

SUPPORTIVE THERAPY

1. Remove excessive clothing or blankets and keep the child in a well – ventilate room.

2. Encourage the intake of extra fluids to compensate for increased insensible fluid loss and to maintain the blood flow necessary for heat dissipation.

3. Discourage vigorous activities.

4. Give tepid sponging, a cheap, easy and safe physical measure where wet compresses covering the whole body are used to reduce the body temperature. The compresses must be changed every 10 – 15 minutes and repeated until the skin feels cool. The principle of tepid sponging is that the body surface is made wet, when this water evaporates, latent heat is taken from the body, thereby reducing the body temperature.

DRUG THERAPY

Paracetamol, also known as acetaminophen, is the drug of choice because it has minimal side effects.

ISSN (ONLINE) : 2395-695X
ISSN (PRINT) : 2395-695X
Available online at www.ijarbest.com
International Journal of Advanced Research in Biology, Engineering, Science and Technology (IJARBEST)
Vol. 2, Issue 3, March 2016

The dosage is based on the initial temperature level - 5 mg/kg of body weight for temperature less than 39.2^{0}C (102.6^{0}F) or 10mg/kg for temperatures greater than 39.2^{0}C. The duration of fever reduction is generally 6 to 8 hours. If there is no response, ibuprofen may be used as the second line treatment option. It is the only antipyretic recommended by the WHO as an alternative. It can be used in combination with paracetamol under supervision. Mefenamic acid is reserved for difficult cases.

REFERENCES

1. Achar's Text book of paediatrics, 2012, 4th edition, University press private ltd, pages 236-238.

2. Hockenberry J Marilyn, Wilson David, Wong's Essentials of pediatric nursing, 2015, 10th edition, Elsevier, pages898-899.

3. Kleigman, Stanton, Nelson text book of paediatrics, 2013,19th edition, Elsevier, pages 896-902.

4. Marlow R Dorothy, Redding A Barbara, Text book of pediatric nursing, 2010, 6th edition, Elsevier, pages 370-371.

5. Mc Kinney, James, Maternal child nursing, 2013, 4th edition, Elsevier, pages 927-928.

6.Perry, Hockenberry, Maternal child nursing care, 2010,4th edition, Mosby, pages 1259-1260.