The First Year of Life

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FEVER IN THE OLDER INFANT

The normal oral or rectal temperature is about 37.5°C (99.5°F) and the normal axillary (skin) temperature 37.0°C (98.4°F). If the temperature is 0.5°C above these levels the infant has a fever. In the prodromal period of any infectious disease of childhood fever may be the only symptom.

Specific causes

Tonsillitis—There may be small areas of pus on the tonsils or the throat may be generally red. The presence of pus does not help to distinguish between bacterial infection due to group A streptococcus (*Str pyogens*) and a viral infection. Petechiae on the soft palate usually indicate a viral infection. A throat swab should be taken and a 10-day course of oral penicillin given.

Acute otitis media—Early signs are an increase in the size of the vessels of the upper posterior part of the drum. Later the drum becomes dull pink or red and in severe cases there is bulging. Ear drums can be examined efficiently only if the auriscope has a magnifying lens. It is important to look for swelling or tenderness over the mastoids. The patient may have to be admitted if the symptoms are severe. Oral ampicillin, amoxycillin, co-trimoxazole, or erythromycin is a suitable drug. The drum should be examined again after two days, and if there is no improvement the antibiotic should be changed.

Septicaemia—There are no specific signs. The infant appears extremely ill. In meningococcal septicaemia there is a generalised purpuric rash. Intravenous or intramuscular penicillin should be given immediately and the infant admitted, with the doctor taking the child to hospital himself if necessary. An infant with meningococcal septicaemia may die within a few hours of the onset of symptoms.

Meningitis—Irritability, drowsiness, and vomiting are common. A convulsion accompanied by fever may be the first sign. Neck stiffness is rare and raised anterior fontanelle tension is a late sign. Unusual drowsiness is a sinister symptom and the patient needs to be admitted for a lumbar puncture.

Roseola—Although fever may be present in the prodromal period of any infectious disease of childhood, pronounced fever is a notorious feature of roseola infantum. The temperature usually reaches 39° to 40°C and remains at this level for about three days. The temperature falls as discrete minute pink macules appear on the trunk; these may spread to the limbs within a few hours. The infant appears less ill than might be expected from the height of the fever. The suboccipital, cervical, and postauricular lymph nodes are often enlarged and the blood picture frequently shows neutropenia.

Urinary tract infection—Urinary tract infection in children often presents simply with fever. It is essential that a carefully taken specimen of urine is sent to the laboratory promptly. The presence or absence of proteinuria is of no value in the diagnosis or exclusion of a urinary tract infection. Possibly the child may have to be admitted because an accurate diagnosis is essential, and every child with the first urinary tract infection needs an intravenous pyelogram and follow-up urinary specimens for at least two years. A micturating cystogram is indicated in some of these children. If the child is not severely ill no treatment should be given until the result of the urine culture is available, which is usually within 24 hours. A course of co-trimoxazole is started, and the treatment can be changed the following day when the results of antibiotic sensitivity tests are received.

Pneumonia—A raised respiratory rate at rest and fever may be the only signs of pneumonia and a chest radiograph may be necessary to show consolidation. Movements of the alae nasi and indrawing of the chest wall between the ribs are confirmatory signs.

Osteomyelitis or septic arthritis may present with fever. In the early stages the only helpful sign may be the infant's reluctance to move a limb, and radiographs are often normal. Later there is redness, swelling, and tenderness at the site of the osteomyelitis, which usually affects the maxilla, long bones, or vertebrae in infants.

Malaria—If within the previous two years the child has been in an area where malaria is endemic blood films should be examined immediately for malarial parasites. The parasites are most numerous during fever but may be found at any time.

Pyrexia of unknown origin

The infant has no localising symptoms or signs. If he simply has fever he should be seen again within a few hours or admitted to a cubicle on a children's ward for observation. Usually these children will have a full blood count, microscopy, and urine culture and sometimes blood culture and CSF examination.

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