Clinical Design & Innovation
Person-centred, co-ordinated care

PAEDIATRICS

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Fever in Young Children

BACKGROUND

- In treating a febrile child, it can be challenging to distinguish the unwell child with a serious bacterial infection from a well child with a common viral infection
- Use the Traffic Light System (NICE CG160) as a guide

MEASURING TEMPERATURE

- 0-4 weeks: Electronic thermometer in axilla
- 4 weeks-5 years: As above or infrared tympanic thermometer
- Infrared and chemical forehead thermometers are unreliable in children and should not be relied upon
- Subjective temperatures reported by parents should be considered valid

CONSIDER SEPSIS/ MENINGITIS

- Always ask 'Could this be sepsis?"
  - o fever or
  - o signs of infection or
  - o if there is concern from a care-giver or medical profession that a child is very unwell.
- Particular care should be taken with vulnerable patients, if there is a language barrier and in acute but vague symptoms.
- Use of a traffic-light system for this is may be of assistance -either a local guideline or the NICE (NG51) risk stratification tool
- Signs of particular concern include
  - o Pale/mottled/ashen/blue
  - o Poor response to social cues
  - o Does not wake if roused
  - o Weak, high-pitched or continuous cry
  - o Grunting
  - o Tachypnoea: RR >60/min
  - o Moderate to severe chest indrawing
  - o Reduced skin turgor
  - o Non-blanching rash
  - o Bulging fontanelle
  - o Neck stiffness
  - o Status epilepticus
  - o Focal seizures
  - o Focal neurological signs

ADVICE TO PARENTS

Use paracetamol or ibuprofen in a febrile child **who appears distressed**

Advise parents that antipyretics do not prevent febrile seizures

FEVER HISTORY

- Duration
  - Consider Kawasaki disease in fever > 5 days or typical KD features and fever approaching 5 days.
- Rash
- Colour: Pink, pale, mottled or blue?
- Contacts and Travel
- Associated symptoms
  - o Seizure
  - o Neck stiffness
  - o Vomiting
  - o Diarrhoea
  - o Cough
  - o Breathlessness
  - o Dysuria
  - o Localised pain
- Deterioration and recurrence of fever after a short recovery should raise suspicion of a secondary bacterial infection (eg bacterial pneumonia after a viral RTIs, or UTI after a diarrhoeal illness)

EXAMINATION

- Expose the child fully and examine head-to-toe
- Vital signs including temperature
- Assess hydration
- Capillary refill time (<2 secs)
- Examine skin for rash
- Look for signs of meningism
- ENT exam
- Respiratory exam: signs of respiratory distress
- Palpate abdomen for masses/ tenderness
- Joint exam: swelling, tenderness, paresis
- **Urinalysis** - especially if vomiting is present without diarrhoea

SIGNS OF DEHYDRATION

- Reduced skin turgor
- Cool peripheries
- Dry lips, reduced tears and saliva
- Ensure adequate fluid intake - Should be **over 50% of normal fluid intake and urine output (Wet nappies)!**
- Fluids should contain sugar (eg diorylite or apple juice) if child is anorexic
- In a prolonged illness (eg >3-5 days use a higher adequate fluid intake e.g. >60-70%)
- Advise parent to seek further help if child deteriorates

LOW RISK CHILDREN

If **over 3 months old** and meeting all the below criteria with no features of moderate or severe illness may be considered low risk or serious infection

- Normal colour of skin, lips and tongue
- Responds normally to social cues, content or smiles
- Stays awake or awakens quickly
- Strong normal cry or not crying
- Normal skin and eyes
- Moist mucous membranes

Children with fever **between 28 days and three months old,**

- With a clear viral source of infection, who are otherwise well, with no red or amber flags and do not need supportive hospital care may be managed in the community with safety netting and follow up.
- If there is not an obvious viral cause of infection, or any concerning features are present or if follow up or safety netting cannot be done with confidence then these children should attend hospital regardless of their appearance.

All neonates (=/<28 days old) should be referred to hospital in the event of a subjective or documented fever -even if they look well

IF YOU SUSPECT SEPSIS/ MENINGITIS

- Children with suspected bacterial sepsis/meningitis should be transferred to hospital immediately
- Give IM or IV penicillin as soon as possible if suspected meningococcal disease (meningitis with non-blanching rash or meningococcal septicaemia)
- Do not delay transfer to hospital to give antibiotics
- Withhold if history of anaphylaxis after a previous dose

TAKE HOME MESSAGES

Go by your instincts and respond to significant parental anxiety

Expose child fully to examine for rashes and bones/joint infections

Check urine of all febrile infants

Always ask parent to seek review if later deterioration

Beware of tachycardia in the quiet child

Ref: Fever in Young Children 10/23. CDI/0066/2.0/2023

REFERENCES:
1. NICE Guideline NG143 Nov 2021: Fever in the under 5s: assessment and initial management
2. NICE Guideline NG51 Nov 2017:Sepsis: recognition, diagnosis and early management
3. NICE Guideline CG102 June 2010: Bacterial meningitis & sepsis