Clinical Guideline

WATCh – MANAGEMENT OF CHILDREN WITH ACUTE UPPER AIRWAY OBSTRUCTION

SETTING	Wales and West Acute Transport for Children (WATCh)
FOR STAFF	WATCh Team, South West and Wales District General Hospital medical and nursing teams.
PATIENTS	Children with severe acute upper airway obstruction in a DGH

GUIDANCE

Upper airway obstruction is defined as blockage of any portion of the airway above the thoracic inlet. Stridor, suprasternal retractions, and change of voice are the sentinel signs of upper airway obstruction.

GLOSSARY	ENT Ear Nose and Throat ETT Endotracheal Tube IO Intraosseous IV Intravenous
RELATED DOCUMENTS	WATCh intubation guideline, WATCh difficult airway guideline, WATCh securing and management of endotracheal tubes
AUTHORISING BODY	WATCh guideline group
SAFETY	Call WATCh for advice and support
QUERIES	0300 0300 789

MANAGEMENT OF CHILDREN WITH ACUTE UPPER AIRWAY OBSTRUCTION

GENERAL MANAGEMENT

Senior review (including early involvement of anaesthetics / ENT if obstruction is severe)

Avoid upsetting the child

- Keep the child comfortable with parents present
- Do not inspect the airway
- Do not attempt IV access, blood tests, X-rays
- Do not force an oxygen mask over the face

Reduce airway swelling with Adrenaline nebulisers (0.4mL/kg of 1:1000 solution to a maximum of 5mL – can be repeated as required).

Consider treatments for specific causes e.g. croup (Dexamethasone), anaphylaxis (Adrenaline, steroid, anti-histamine), epiglottitis or bacterial tracheitis (antibiotics).

Continuous monitoring for deterioration – signs of concern include hypoxia (occurs late in upper airway obstruction), reduction in conscious level, decreased air entry, requirement for repeated adrenaline nebulisers.

INTUBATION

Call for senior anaesthetic and ENT support to be present at the intubation

Consider location – for access to equipment theatres is ideal but balance against the risk of transporting a child with an unstable airway around the hospital

Temporise as much as safely able while getting people and equipment ready (adrenaline nebulisers, PEEP if tolerated)

Anticipate a smaller ETT requirement than indicated by age – start with ½ size smaller than standard calculations, uncuffed ETT preferred. DO NOT CUT

Have IO available unless IV access is in situ at induction

Gas induction is preferred whenever possible. IV induction is an alternative when benefits (e.g. equipment availability) outweigh risks of worsening airway obstruction.

Muscle relaxant may make mask ventilation easier

Place and aspirate NG tube to decompress stomach

Anticipate a difficult airway and ensure equipment and personnel for emergency oxygenation plans are prepared (including front of neck access). This includes an ENT surgeon where possible.

INDICATIONS FOR INTUBATION

Suspected epiglottitis

Inhalational injury

Reduction of conscious level

Exhaustion

Refractory hypoxia or hypercapnia

MANAGEMENT FOLLOWING INTUBATION

Secure ETT, continuous $EtCO_2$ monitoring

CXR for ETT position

Avoid changing the ETT when possible

Place two secure points of IV access – peripheral access is usually sufficient unless peripheral access is difficult or shock is present.

Maintain sedation with IV morphine and midazolam infusions and muscle relaxation with a continuous infusion of Rocuronium)

Specific treatments if not already instituted (e.g. Dexamethasone 0.25 mg/kg IV for croup, antibiotics (Co-Amoxiclav or see local guideline for epiglottitis or tracheitis).