

# PREMEDICATION DRUGS USEFUL FOR CHILDREN

Dr Beth Newstead, Exeter, UK

*Parents are often the best pre-medication" - G. Gordon MD*

Routine sedative premedication is unnecessary for the majority of children, although a few patients will require this, often based around previous experience. Analgesia drugs are particularly useful when given preoperatively as the analgesic effect is present on awakening. Drugs to reduce the pain of venepuncture are commonly used.

## Local Anaesthetic Creams

These creams are simply and easily applied and allow intravenous access in a relatively pain-free manner. The secret to success is correct application (see below).

### **Ametop (= topical amethocaine gel)**

Ametop should be applied in a generous layer over veins suitable for cannulation (most commonly the dorsum of the child's hands). It should be applied to a minimum of 2 sites. The cream is covered with an occlusive dressing. For best results it should be applied 30-45 minutes prior to venepuncture. Its effect lasts for several hours (even when the cream is removed).

### **EMLA cream (= eutectic mixture of local anaesthetic: lignocaine and prilocaine)**

EMLA cream is applied in a similar manner to that described above. It can be applied 1-5 hours prior to venepuncture. However, once the cream has been removed, its anaesthetic effect wears

off very rapidly (within 20-30 minutes). It is reported to cause vasoconstriction and thus Ametop is often preferred if there is a choice. It is not suitable for use in children under 1 year.

## Sedatives

Undergoing surgery can be a traumatic experience for children. Fear of pain and unpleasant procedures may cause significant upset. Younger children are unlikely to understand what is happening to them and are particularly likely to become distressed. Attempting to establish a rapport with the child, allowing patients into the anaesthetic room and topical local anaesthetics are all helpful strategies. However in a few cases the decision may be made to employ sedative medication. In particular this may be useful in children likely to undergo multiple operations/ procedures.

Benzodiazepines are the most commonly used sedative.

Ketamine has been suggested as an alternative pre-med in children. In low doses ketamine has hypnotic, analgesic and amnesic effects. Ketamine may be associated with emergence phenomenon in some children.

Drug	Route of administration	Dose
Ketamine	PO	7mg/kg
Ketamine	IM	2mg/kg

Drug	Route of administration	Dose	Comment
Midazolam	PO	0.5mg/kg	Mixed with fruit juice or Calpol (to mask taste). Acts within 15-30 min.
Midazolam	Intranasal	0.5mg/kg	Unpleasant for the child
Temazepam	PO	0.5-1.0mg/kg	

### Analgesia

As with adults there has been a trend towards pre-emptive analgesia. If a child can be easily persuaded, then a combination of paracetamol and ibuprofen syrup given pre-operatively is very useful. If stronger analgesia is required (often in emergency patients) then opiates can be utilised. Intra-muscular injections should be avoided. If coercing a child to take medication is likely to cause upset then giving PR medication at the time of induction is an excellent alternative (but make sure the parents consent for this first).

A recent development in paediatric analgesia is the use of intranasal opiates. They work quickly, are generally well tolerated and avoid the need for intravenous access. A suitable dosing regime for intranasal diamorphine is shown below.

The child is weighed. The above chart is then used to work out the correct volume of saline to add to 10mg of diamorphine. 0.2mls of this solution is then drawn up into a 1ml syringe. The child is sat at 45 degrees and 0.1mls of the solution is squirted up each nostril.

Drug	Route of administration	Dose
Paracetamol	PO/PR	15-20mg/kg
Ibuprofen (over 7kg)	PO	5-10mg/kg
Diclofenac (over 1 year)	PO/PR	1mg/kg
Morphine	IM	200mcg/kg
Morphine (Oromorph = oral preparation)	PO	400mcg/kg

Weight of child (kg)	Volume of saline (ml)	Dose of Diamorphine (mg)
10	2.0	1.0
15	1.33	1.5
20	1.0	2.0
25	0.8	2.5
30	0.66	3.0
35	0.57	3.5
40	0.5	4.0
45	0.44	4.5
50	0.4	5.0

#### ALL AFRICA ANAESTHESIA CONGRESS

*Dear Colleague*

Greetings from Tunisia, a friendly country with a great history and legendary hospitality.

I am honored to invite you to All Africa Anaesthesia Congress (AAAC 21 - 25 MAY 2005) at which leading anaesthesiologists will focus on the advancement of anesthesia and intensive care around the world.

The congress will be held in the delightful venue of Yasmine Hammamet Harbor, beside the Mediterranean Sea. Special accommodation rates and excursions will be available for you over the congress period.

This will be the Third All-African Anaesthesia Congress, organized by the World Federation of Societies of Anaesthesiologists (WFSA), the Maghrebian Federation of Societies of Anaesthesiologists (FSMAR) and the Tunisian Society of Anaesthesia, Analgesia and Intensive Care (STAAR).

We have developed a comprehensive scientific program with workshops and symposia on exciting topics ranging from Pain, Emergency medicine, Anaesthesia, Critical Care, Research and Education to Ethical issues in ICU and Anaesthesia.

We will have over 60 speakers from 30 countries sharing their ground-breaking discoveries in these research areas with you. You will have the golden opportunity to meet our distinguished speakers.

I urge you to take this opportunity to register early, and encourage other Anaesthesiologists to do the same. Our congress secretariat will be pleased to assist with information on the congress packages.

With so many exciting programs and excellent speakers, I am certain that you will acquire state-of-the-art knowledge that will make a substantial difference in your professional life and patient outcomes. I am confident that this meeting will be a great learning experience, which will contribute extensively to your sphere of work.

Please visit us at <http://www.aaac2005.com/> to view and download a brochure for your reference. If you wish to submit an abstract, please do so before the 31th of January 2005. My team and I look forward to welcoming you in Hammamet from 21 - 25 may 2005.

Yours sincerely

**Dr Mohamed Salah Ben AMMAR**

*Chairman of the congress*