

SHOULD WE POSTPONE A CASE?

Dr.R.Jayanthi
Senior Consultant, Kanchi Kamakoti
CHILDS Trust Hospital,
Chennai, India

Common reasons for Postponement - 1

- Inadequate Fasting
- URI
- LRI, Wheeze
- Cardiac evaluation for murmur
- Preterm
- 'Low Hb'
- Fever

Common reasons for Postponement - 2

- Coagulation abnormalities
- Syndromic children
- Difficult airway
- Inadequate Premedication
- Electrolyte abnormalities
- Diabetes
- Others

Case 1

- 7yr old boy who has come to the hospital with lower abdominal/testicular pain
- Posted for scrotal exploration for torsion testis
- Has had juice an hour before

“Inadequately” Fasted

Misconception – Prolonged fasting

Based on assumption that residual gastric fluid vol. of $>0.4\text{ml/kg}$ and $\text{pH}<2.5$, resulted in entire contents being funneled up into trachea to cause aspiration

Reality – Incidence of aspiration in routine Paediatric elective cases – low, 1 to 8 per 10,000, vol of gastric fluid $>0.8\text{ml/kg}$

When aspiration occurs, sequelae minimal in ASA 1 and 2

Clear liquids -1/2 life 15 min

Current Fasting guidelines

- More Humane
- Avoids Hypoglycemia (limited glycogen in premies)
- Lower incidence of anaesthetic induced hypotension
- Avoid administration of glucose containing solution
- Avoids fall in gastric fluid pH to <2.5

Fasting Guidelines

Age	Clear Liquids	Milk/solids
<6 months	2 hours	4 hours
6mts to 3 yr	3 hours	6/8 hours
> 3 years	3 hours	6/8 hours

URI

Anesthesia for the Child with an Upper
Respiratory Tract Infection: Still a Dilemma?

Alan R. Tait, PhD, and Shobha Malviya,

Anesth Analg 2005;100:59-65

URI - Active or Recent

- More episodes of Breathholding
- Laryngospasm
- Desaturation
- Bronchospasm
- Overall adverse respiratory events

So why not cancel all URI?

“Serious” URI



- Sore throat
- Sneezing
- Purulent Rhinorrhea and congestion
Presence of fever $>101^{\circ}\text{F}$
- Productive cough
- Laryngitis and malaise

Baker et al – any 2 of these + ,postpone

Baker SB. Upper Respiratory Infection in Children. Semin Anesth 1992;41:121-123.

Atopic rhinitis

- Clear rhinorrhea
- No fever
- Dry cough
- H/O atopy

Predictors of anaesthetic complications

- Presence of sputum/copious secretions
- Presence of Nasal congestion
- H/O reactive airway disease
- Surgery involving the airway
- Prematurity
- Use of ETTube in a child <5 yrs of age
- Induction agent, Thio> Halo> Sevo> propofol
- Use of Anticholinesteras



Anaesthetic technique ???

LMA



mask



ET Tube



Management of Anaesthesia

- Use antispasmodics / bronchodilators
- Humidify gases / Hydrate child
- Adequate suctioning before induction? In deep planes
- Maintain adequate depth of anaesthesia
- Extubate when awake
- Observe in PACU
- SpO₂ monitoring vital at all times

Anaemia

- Myth - Hb of 10gm/dl
- Reality - No consensus
- Most anaesthesiologists would agree with a haematocrit of > 25% or Hb 8gm/dl
- Chronic Anaemia – CRF, haemoglobinopathies ,can accept lower Hb values maybe 7gm/dl or upto 5 gm% Depends on Procedure and state of child

- Newborns /preterms are different/Normal values/Physiological anaemia
- Preterm accept Hct of 30%
- ASA guidelines for transfusion - <6gms transfuse, >10 gms no need to transfuse
- 6 to 10gms use discretion depending on clinical state of child, impending blood loss, Other factors
- Ref:pg177-187,A Practice of Anaesthesia for Infants and Children Cote, Lermann, Todres

Consider

1. Nature of surgery/ blood loss expected
2. Cardiorespiratory reserve of the child
3. Elective/emergency
4. Elective procedures – Postpone to investigate cause of anaemia, treat and proceed
5. Emergency? Preterm $<30\%$ Hct ?



Anaemia

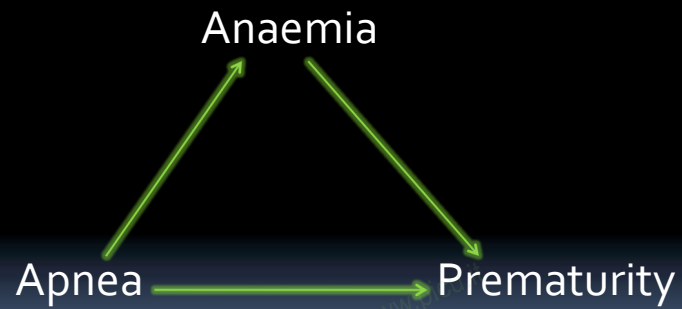
Premature infant for surgery

- Preterm 32wk PCA , gest age of 28 wks, Hb of 14gm/dl for herniotomy
- 46wk PCA, Gest age 34 wk Hb 8gm/dl For herniotomy



Apnea inversely proportional to PCA and Gest. Age

Prematurity



Some Causes For Apnea

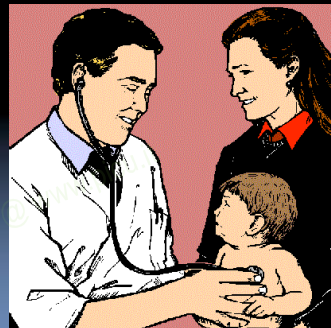
- Metabolic
- CNS immaturity
- Sepsis
- Pharmacologic

prematurity

Prematurity

- At 44 wks – 5% chance of Apnea
- At 55wks – 1% chance of apnea
- Ideal to admit all infants <60 wks PCA
- Inj.Theophylline 8mg/kg oral
- Inj.Caffeine 10 mg/kg Iv helps in prevention of postop apnea

Incidental discovery of a murmur at preop evaluation



POCA registry 2000/2007

- Infants younger than 1 yr of age accounted for 55%, 33% of all anaesthesia related arrests
- Severe underlying patient disease such as prematurity, congenital heart disease, and other congenital defects place the infant at higher anesthetic risk than the older child

Anesthesiology 2000; 93:6-14 o 2000 Anesthesia-related Cardiac Arrest in Children Initial Findings of the Pediatric Perioperative Cardiac Arrest (POCA) Registry Jeffrey P. Morray, Jeremy M. Geiduschek, Chandra Ramamoorthy, Bhanankar et al, Anaesth analg, 2007

Are all murmurs pathological ?

- 50 to 75% of all murmurs are innocuous
- ECHO, Cardiac Evaluation indicated if
 1. The child is younger than a year of age
 2. The murmur fits pathological criteria
 3. There are cardiac signs or symptoms
 4. Evidence of LVH or RVH

Should I do this case? – the paediatric murmur, [CME: Your SA Journal of CPD, March, 2008](#) by [Johan Diedericks](#)

PATHOLOGICAL MURMURS ARE

- Diastolic, pansystolic or late systolic ,continuous (other than ven.hum)
- Usually loud (3/6 or more)
- Associated with a thrill
- Symptoms or signs of cardiac disease
- S2 inaudible or not single
- Are not altered with position

Fever

- Parents are often alarmed
- Temperature increase of 0.5 to 1 degree with no other symptoms --- **Proceed**
- Associated constitutional symptoms like rhinitis, pharyngitis, dehydration, --- **Postpone**
- Emergency Surgery and Fever --- Treat fever to reduce O₂ requirement , hydrate --- **Proceed**
- Be Aware of the Exanthematous fevers prevailing. Other inv??

COTWAF website- Preop evaluation of child, Rebecca Jacob

SHOULD WE POSTPONE A CASE ?

Information available @ www.picu.it

Anaesthetic Technique

Experience of anaesthetist

Place

Equipment, personnel available
e.g. Difficult Airway

Type of Procedure

Information available @ www.picu.it

*Thank you for your
attention*

Dr.R.Jayanthi
Senior Consultant, Kanchi Kamakoti
CHILDS Trust Hospital,
Chennai, India

Jaysri6@gmail.com

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