GA for Obstetrics

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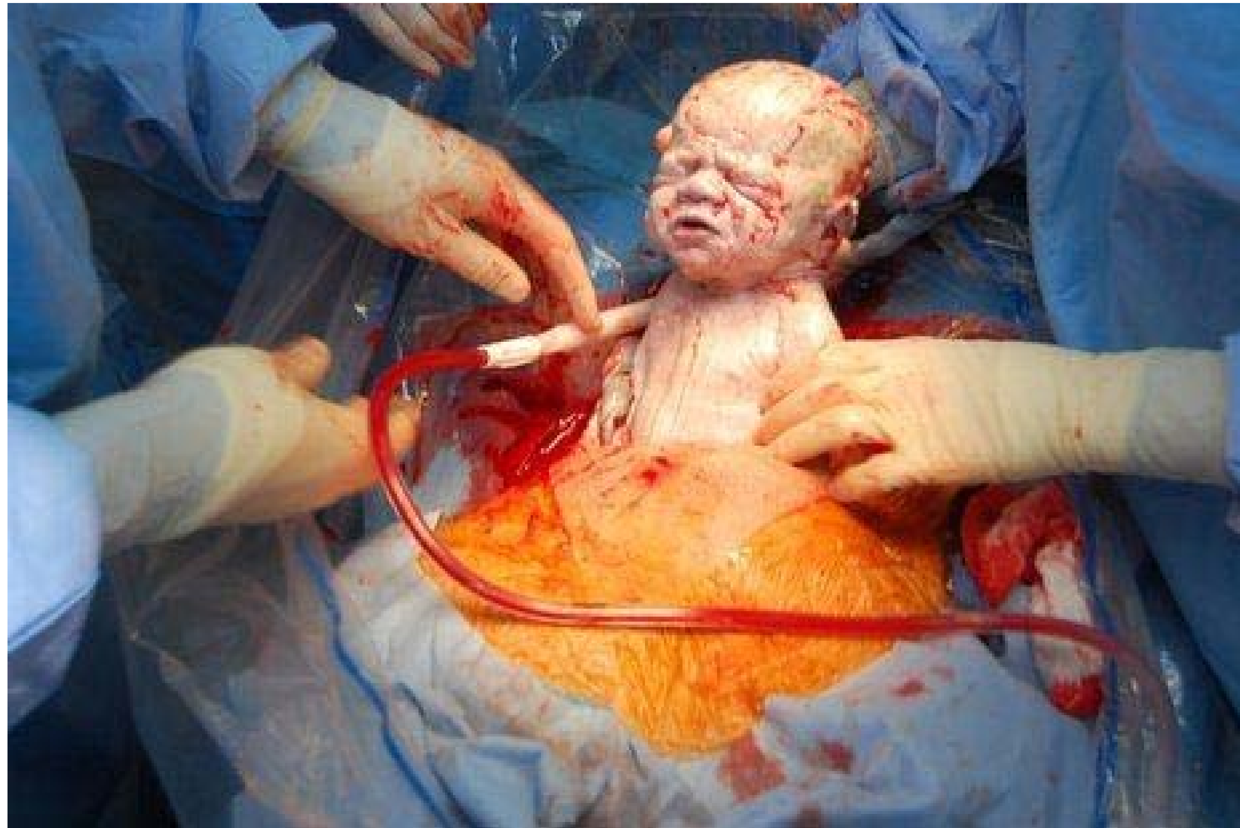
Rise and shine!



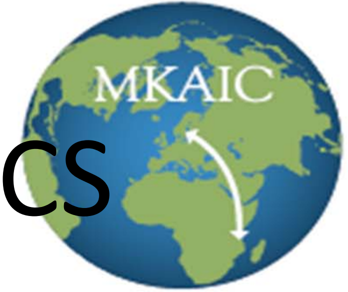
27 year old woman

- 38 weeks pregnant with first child
- Normal pregnancy
- In labor since 21 hours
- Foetal distress
- Baby has to be delivered ASAP

- **What to do?**

Spinal anaesthesia?

Disadvantages with GA for CS



- Higher mortality
- Airway problems?
- Aspiration?
- Awareness - recall?
- Hemodynamics?
- Atonia of the uterus?
- Neonatal effects?

GA or CNB?

Anesthesia related maternal mortality 2000-2002

GA	50/ 1 000 000
CNB	3/ 1 000 000

Why mothers die; www.cmach.org.uk

GA for CS – When and why (not)?

Pro

- Immediate delivery
- Coagulation abnormality
- Mother refuses spinal
- Spinal failed
- Infection at site of incision/ sepsis

Con

- Difficult airway
- Severe maternal respiratory distress

Where to begin?

Suggestions?

1. Medical History

Typical Swedish recommendations when in labor

- Comorbidity?
- Current organ failure?
- Allergies?
- Medication?
- Time since last meal?
- History of complicated GA?

2. Difficult airway?

What to look for?

2. Difficult airway?

- Previous difficulty
- Obesity
- Facial anomaly
- Mouth opening ↓
- Stiff neck
- Protruding incisors
- Submandibular infection/ scarring
- Short neck
- Large tongue
- Small mandible

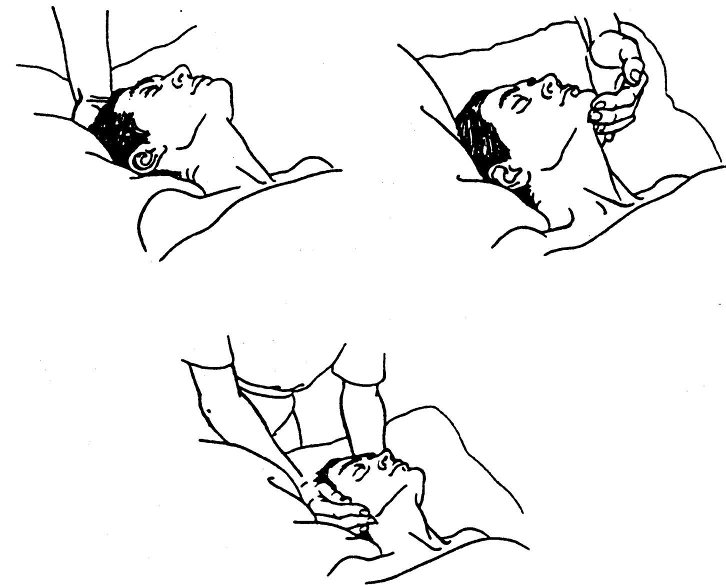
2. Difficult airway

How to assess?

2. Difficult airway

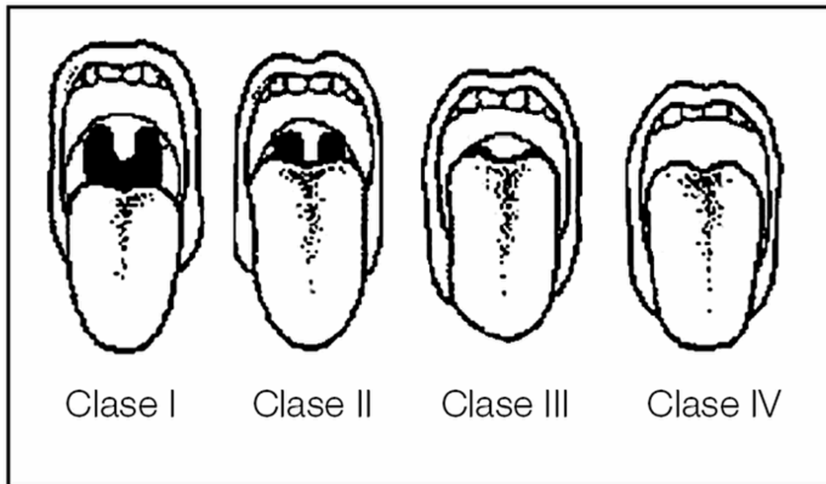
- Mouth opening
- Neck flexion
- Head extension
- Submandibular space for tongue

Sniffing position

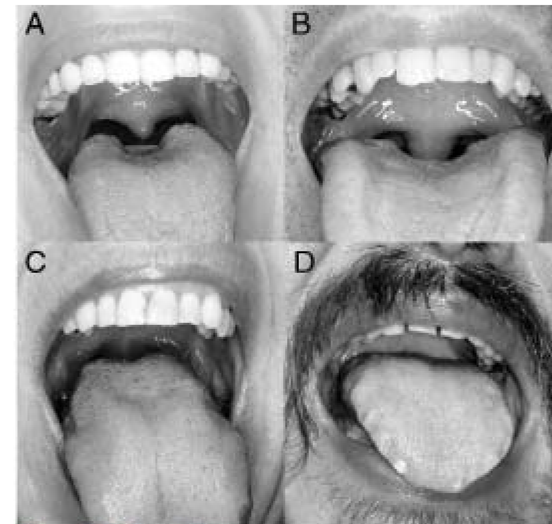


Mallampati

Textbook



Reality



How to interpret?

Normal

- MP 1-2
- 3 fingers/ 5 cm
- > 90°
- Lower incisors beyond upper
- Distance > 7 cm and tissues soft

Possibly difficult

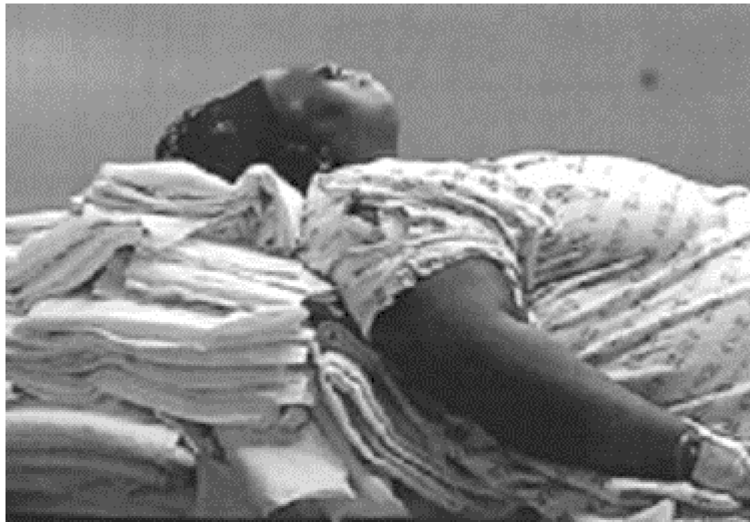
- MP 3-4
- < 3 fingers/ 5 cm
- < 90°
- Lower incisors do not reach upper
- Distance < 7 cm/ tissues resistant

3. Position

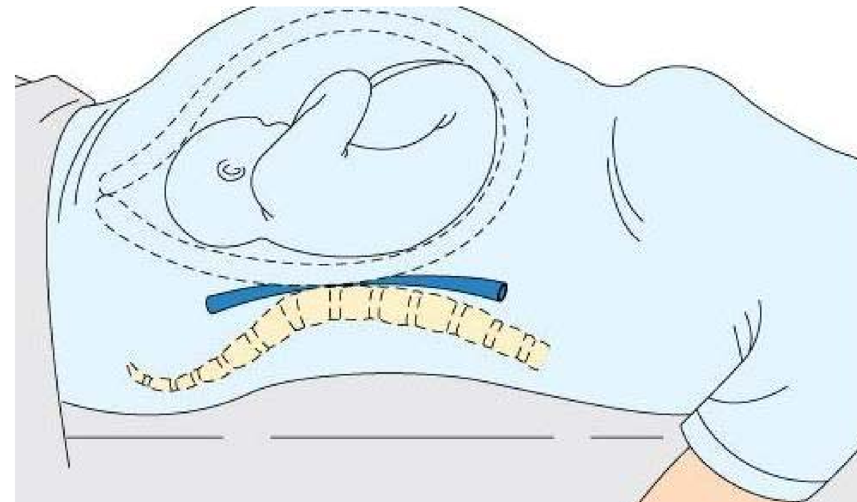
Why is this important?

3. Position

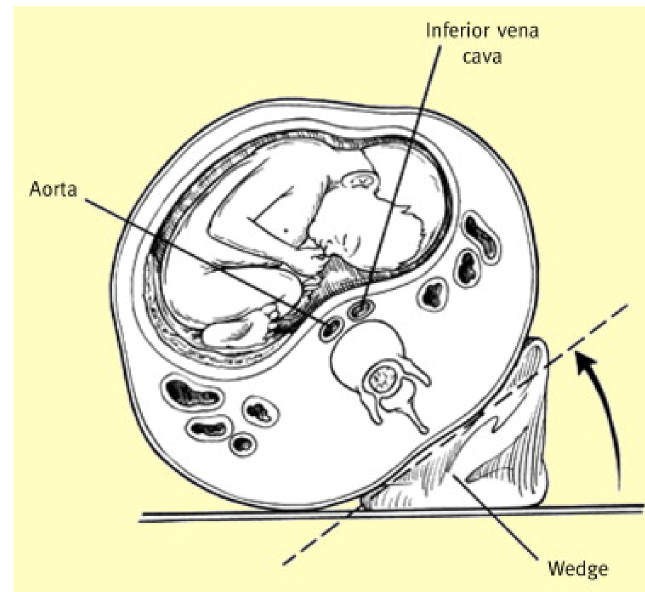
Airway



Circulation



3. Position



4. Equipment ready!

- Use checklist!

5. Surgeon ready!

Let´s go!

How to start?

6. RSI

- **R**apid
- **S**equence
- **I**nduction

6. RSI

How to conduct RSI?

6. RSI

1. Sodium Citrate 30 ml p.o.?
2. Head up tilt
3. Lumbar wedge
4. Suctioning ready for use
5. Position of head
6. Preox 3 min
7. Coload if needed
8. Thiopenthal 4-7 mg/kg
9. Succinylcoline 1.5 mg/kg after flush
10. Wait for end of fasciculations or 45 sec
11. Intubate quickly
12. Ventilate and listen
13. Secure ETT and note position

6. RSI

If shock:

Ketamine 2 mg/kg

Atropine 0.5 mg

Succinylcholine 1.5 mg/kg

(Diazepam after delivery)

Algorithm
Failed intubation

Mask ventilation adequate

No fetal distress → Wake up, Alternative anesthesia

Fetal distress → Continue

Mask ventilation inadequate → LMA, Surgical airway

Difficult intubation

- Always call for help!
- First attempt should be the best one!
- All theatre staff must be aware of life threatening situation

Aspiration of gastric contents

Why?

- Reduced effectiveness of lower oesophageal sphincter
- Raised intragastric pressure
- Opioids
- Risk increased from 2nd trimester

Dangerous?

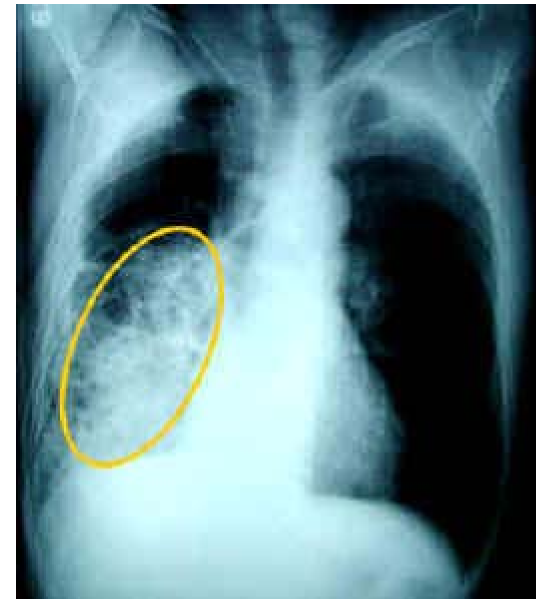
- YES!!!
- Degree depends on pH and volume of aspirate

Aspiration of gastric contents

What to do?

Aspiration of gastric contents

1. Head down
2. Suction
3. Intubation
4. Suction ETT – if possible BEFORE ventilating
5. Need for delayed extubation?



7. Maintain

- Oxygen 50%
- Check HR and SpO_2 every 2 min and BP every 5 min until delivery – after delivery every 5 min
- Volatile agent
  - Start with high dose
  - Lower and give opioid and 5 IU Oxytocin after delivery

8. Wake up

When can the patient be safely extubated?

8. Wake up

Extubate when

1. Patient awake
2. Patient breathing
3. Patient able to protect airway
    - head lift 5 sec
    - squeezes hand
    - can protrude tongue

Diaphragmatic function NOT enough!!!

8. Wake up

Don´t forget

1. Suction of airway pre extubation
2. Nasogastric suction if necessary
3. Give 3 + 3 + 3 mg of Morphine and 1 g Paraceth 30 minutes before extubation

Thank You!