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Intravenous Sedation for Plastic Surgery

Are Your Patients missing out?

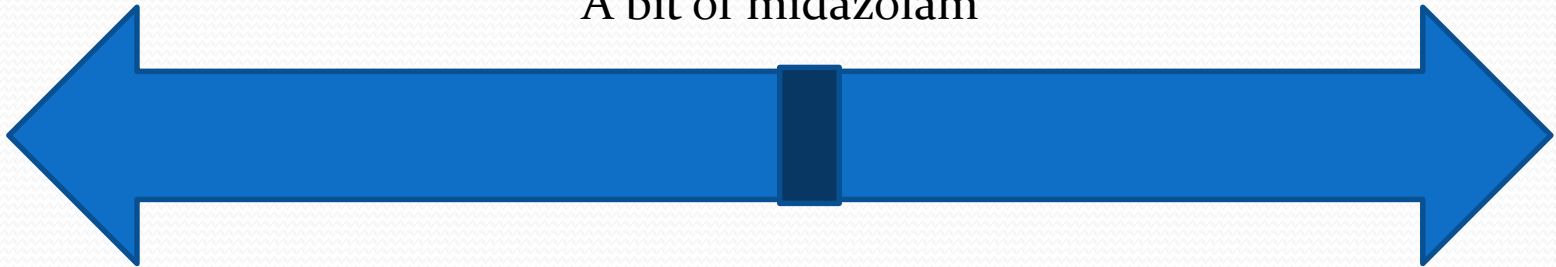
Overview

- What place does deep sedation have?
- Definitions
- Standard Drugs
- Advantages over general anaesthesia
- Evidence from studies
- Typical cases
- Problems/Complications
- Use of sedation overseas

Old Style Anaesthesia (Public Hospital)

- Local Anaesthetic
- General Anaesthetic

A bit of midazolam







Intravenous Sedation

Where it fits in

- Local Anaesthetic
 - General Anaesthetic
- Intravenous sedation





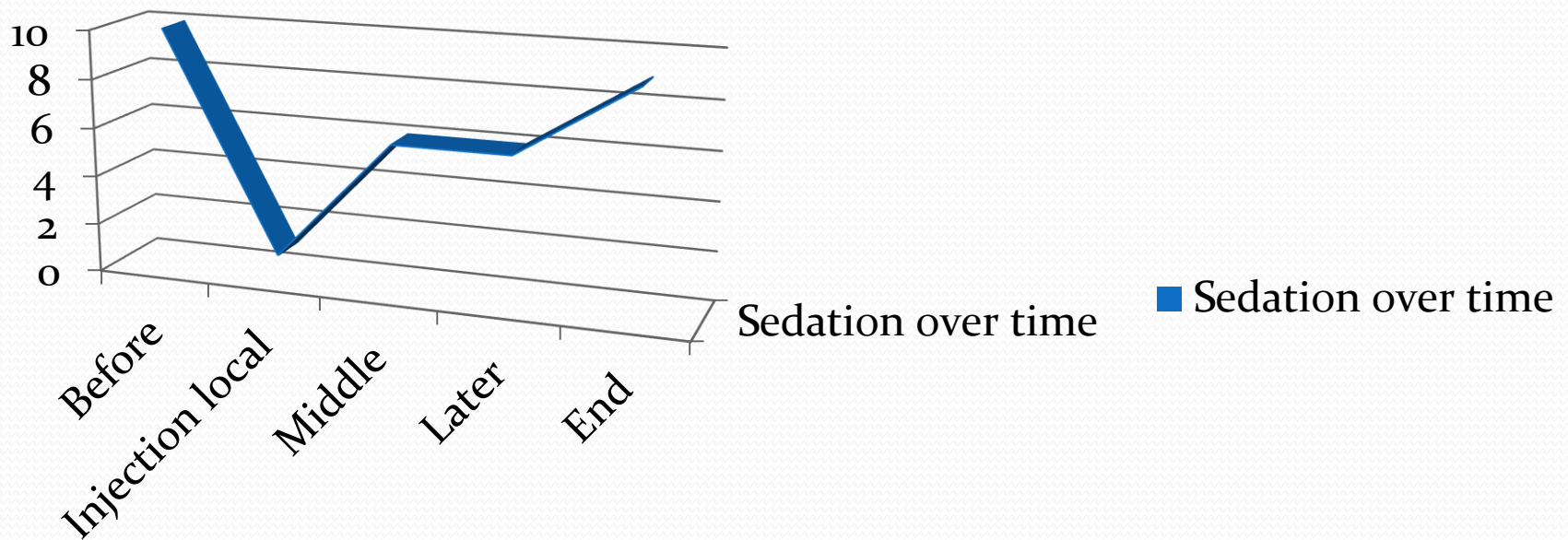
What is intravenous sedation?

Spectrum of anaesthesia

- Local anaesthesia – fully awake
- Conscious Sedation
- **Deep Intravenous Sedation**
- General Anaesthesia

Depth of sedation

Sedation over time



Intravenous Sedation

- Who can we give it to?
 - Analgesia from local anaesthetic

What drug(s) are used?



Local only

or Intravenous sedation?

- Suitable candidates
 - Anxious patient
 - “I don’t want to feel anything”
 - Significantly painful LA injection
 - Arm tourniquet required for surgery

Intravenous sedation - Replacing General Anaesthesia

- Surgical factors
 - Most pain covered by local anaesthetic
 - Skin flap/graft surgery
 - Deeper tissue surgery
 - Hand surgery
- Patient factors
 - PONV
 - Wish to have a fast recovery
 - Unfit for GA
 - Wish to have a “safer anaesthetic”

Advantages over General Anaesthesia

- Less impact on physiology
- Faster recovery
- Less PONV
- Less DVT/PE risk
- Less post operative cognitive impairment
- Faster turnover of cases
- Cost savings for institution
 - In theatre
 - Rapid discharge

Evidence for benefits of Intravenous Sedation vs GA

- Outside Plastic Surgery – Randomised trials
 - 2006 Vascular – Faulkensammer et al – Endovascular AAA
 - 25 Patients undergoing GA or Sedation with Paravertebral blocks
 - More stable BP, Less PONV
 - 2011 International Journal of Gynecology and Obstetrics
 - Araco et al – Randomised 80 Patients – Gynae surgery
 - More rapid recovery, less pain/analgesic requirement, earlier discharge
 - 2013 Journal of Craniomaxillofacial Surgery – Rastogi et al
 - 50 Patients having Mandibular fracture or TMJ operations
 - More rapid recovery and discharge. Less PONV. Less pain/analgesic requirements

Plastic Surgery

Intravenous Sedation vs GA

- 2003 – Plastic and Reconstructive Surgery – Bitar et al
 - Office based day surgery - Charlotte
 - 3615 patients (95%cosmetic)
 - No deaths, No DVT, No PE
 - 0.2% significant PONV (GA 10-20%)
 - One emergency intubation
 - Two patients unplanned overnight stay

Plastic Surgery

Intravenous Sedation vs GA

- 2013 – Journal of Aesthetic Surgery, Failey et al
 - Office based day surgery – Houston
 - 2006 patients
 - No deaths, No cardiac events, No transfers to hospital
 - 1 patient (0.05%) developed DVT/PE
 - Patient had implant exchange, on OCP.

My Journey

- 2003 – SENIOR REGISTRAR
 - – Sedation for Gastroenterology procedures
- 2004 – Two Plastic Surgeons
 - Encouraged and supportive of Sedation for Cutaneous surgery
- 2004-Now – Average 10 sedation cases per week
 - 500 cases per year
 - Over 5000 cases to date

Our Experience – Over 5000 cases

- Predominantly Skin Cancer and Hand Surgery
- 3 conversions to GA – insertion of LMA
- No deaths, No intubation
- 1 patient – concerned regarding being awake
- 1 nasal airway trauma – middle turbinate injury

Common cases

- Skin cancer surgery –with local flap or skin graft
- Surgery on Nose, Ear or Face
- Large number of lesions
- Carpel Tunnel Release
- Hand surgery
- Blepharoplasty



































Problems/Complications

- Moving patient
- Awake patient
- Airway obstruction – support required
- Nose injury
- Conversion to GA



WHATEVER HAPPENS
DON'T LET GO OF MY HAND



Deaths under intravenous sedation

- Michael Jackson – Cardiologist – Conrad Murray
- Dental sedation in America
- Deaths in Australia

Raven Blanco



Deaths from sedation in Australia

- 50 deaths from anaesthesia per year (1 in 100,000 anaesthetics)
 - 5 deaths per year from deep sedation (endoscopy and dental)
 - 2 deaths per year from operator/sedationist
- NSW/SA legislation requires 2nd doctor for anything more than conscious sedation

Overseas - United States/Europe

- Europe
 - Much greater role of sedation with regional blocks
- United States
 - Office based anaesthesia – significant cost savings
 - Provided by Anaesthetist or CRNA depending on state
 - IV sedation for cosmetic surgery



