

ANALGESIA AND PROCEDURAL SEDATION

Learners Guide

Author **Lauren Shearer**

(Edits by the DFTB Team)

fellows@dontforgetthebubbles.com

PRE-READING

Reading, watching or listening to these resources will help with a basic understanding of the topic before the session.

Pain and analgesia: PEM playbook

Procedural sedation: OpenPediatrics

RCEMLearning: Ketamine Sedation in Children

PAIN AND ANALGESIA: BASIC CASES (2X10 MINUTES)

CASE 1

Lily, 4 years old presents to the ED with her mother after falling from a scooter whilst in the park. She is holding her arm and not using it. There is no obvious gross deformity.

How would you do a pain assessment in this age category?

What would be the optimum analgesia choice based on a severe pain score?

What other methods or non-pharmacological adjuncts can be used?

When should we reassess the pain?

CASE 2

Frank, 8-years-old was playing in the street with friends and fell over. He cut his knee on some broken glass and sustained a 4 cm laceration over his patella. An x-ray shows no foreign body and no fractures. The knee is swollen and the laceration requires suturing. On pain assessment he is reporting mild pain.

What are your initial considerations?

What are the options for cleaning and closing?

PROCEDURAL SEDATION: ADVANCED CASES (2X20 MINUTES)

ADVANCED CASE 1

Freddie, 9-years-old attends the emergency department after falling from the monkey bars. He has sustained a displaced and angulated supracondylar fracture. He has some tingling at the fingers in the ulna distribution and therefore requires urgent manipulation.

You decide to use nitrous oxide.

Do you need any pharmacological adjuncts?

What about non pharmacological?

What other considerations should be made?

ADVANCED CASE 2

Lola, 2-years-old has fallen in the playground and sustained a laceration to the forehead. Lola had an ice cream after the incident in an attempt to settle her. She has no past medical history and was born at term. Can she have procedural sedation in the department? What are the considerations?

What drugs do you need for the sedation?

Should you use any adjuncts with the ketamine?

Are there any emergency drugs you should have available?

There are no contraindications and you decide to go ahead with ketamine sedation, during the procedure whilst full monitoring in place the CO₂ trace is lost. What is your structured approach to management of this scenario?

QUIZ (10 MINUTES)

Question 1: (True/false)

When should you assess a child's pain and document a pain score in the emergency department when they present with an injury?

- 1 Wait until the child is seen by a doctor before assessing pain
- 2 At triage
- 3 Immediately after giving oral analgesia
- 4 Within 60 minutes of receiving analgesia for moderate and severe pain
- 5 When the child or the child's parents informs you they are in pain

Question 2: (True/false)

Which of the following predict possible airway difficulties in children?

- 1 C-spine immobilisation
- 2 Premature birth requiring NICU
- 3 Trisomy 21
- 4 Mouth breathing or frequent drooling
- 5 Reduced mouth opening

KEY LEARNING POINTS TO TAKE HOME (5 MINUTES)

- 1** Pain should be assessed at the earliest opportunity after arrival in the ED and assessed regularly.
- 2** Pain should be treated according to pain assessment.
- 3** Non-Pharmacological adjuncts should always be considered in the management of pain.
- 4** Paediatric procedural sedation should be considered for assistance with painful and distressing procedures needed within the emergency department.
- 5** Paediatric procedural sedation should only be carried out by those persons adequately trained with an awareness of the rare but critical complications in an appropriate setting.

REFERENCES

PEM playbook: paediatric pain

OpenPaediatrics: procedural sedation

RCEM guidelines: Management of pain in children, Rev 2017

RCEM guidelines: Ketamine sedation for children in emergency departments, Rev 2020

DFTB: Wound management, 2020

DFTB: All work and no play, 2017

DFTB: Procedural sedation, 2020

DFTB: Needle or damage done, 2016

EM cases: procedural sedation, 2016

St Emlyn's: Paediatric pain and sedation – tips to change your practice from EuSEM15, 2015

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