BRONCHIOLITIS

Learners Guide

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PRE-READING

Khan Academy pathophysiology video

OpenPaediatrics YouTube vid summarising pathophysiology

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OpenPaediatrics YouTube vid summarising pathophysiology

Best practice: Bronchiolitis, Archives of Disease in Childhood E+P (2005)

McMaster Pathophysiology Review: Bronchiolitis (2004)

Also aim to listen to the PEM Playbook or EM Cases Podcast.

PEM Playbook (2016)

EM cases (2015)

CASE 1 (15 MINS)

A 7 month old infant presents on Day 4 of the illness. He has mild to moderate work of breathing. Sats 95% in air. He is taking around half his normal feeds.

What investigations and treatment options should you consider?
Why doesn't salbutamol work in this age group?
How do you know when to admit?

CASE 2 (15 MINS)

A 6 month old infant presents on Day 3 of the illness. She has moderate to severe work of breathing. Sats are 91% in air. She is struggling to feed at home.

What management options would you consider?
How do you set up high flow?
Will you opt for NG feeds or IV fluids?

ADVANCED DISCUSSION

ADVANCED CASE 1

You have a 12 month old infant, with two days of coryza and one day of increased work of breathing symptoms. How do you manage them?
How do you figure out whether they have bronchiolitis or VIW?

ADVANCED CASE 2

You've started high flow 2L/kg for a four month old with bronchiolitis, moderate work of breathing and saturations of 88% and titrated FiO2 up to 30% to maintain saturations above 92 (or 94)%.

However they are still intermittently desaturating so you titrate them up to 40% FiO2.

They have ongoing work of breathing with a respiratory rate of 60-70.
What are your next steps?

Question 1.

In bronchiolitis, children do not respond to salbutamol because:

A
They don't have beta receptors until they are older.

B
The beta receptors are immature and do not begin functioning correctly until the child is older.

C
The large amount of secretions interfere with it and prevent it binding to the receptors

D
There is no bronchospasm for the salbutamol to act on.

Question 2.

A 3 month old baby presents to ED with coryza, cough, and poor feeding. Breastfeeding is going ok, but the baby is feeding for shorter periods, more frequently than usual. She is having wet nappies as normal. Saturations are 93% on room air, RR is 62, and there is moderate subcostal recession with some nasal flaring.

Which of the following is an indication to admit this baby to hospital?

A
The reduced breastfeeding

B
The oxygen sats

C
The work of breathing

D
The age of the baby

Question 3.

You have a 10 month old baby with bronchiolitis who is to be commenced on high flow. Which of the following is false?

A
Nasal prongs size should be estimated based on the width of the patient's nostrils.

B
Patients can be NG fed immediately once on high flow.

C
High flow improves the functional residual capacity.

D
The humidified oxygen help clearing mucous secretions.

TAKE HOME TIPS

1 Do not trial salbutamol (and understand why it doesn't work)

2 Consider NG fluids as an option for feeding

3 Understand there is likely to be no role for investigations

4 Consider starting high flow and know how to set it up

5 Know when to admit v discharge

REFERENCES

Khan Academy pathophysiology video

OpenPaediatrics YouTube vid summarising pathophysiology

Best practice: Bronchiolitis, Archives of Disease in Childhood E+P (2005)

McMaster Pathophysiology Review: Bronchiolitis (2004)

PEM Playbook - Bronchiolitis (2016)

EM cases - Bronchiolitis (2015)

Why bronchiolitis doesn't get better with inhalers and how understanding "why?" is better than "do that!", GPPaedsTips (2016)

NICE: Bronchiolitis in children - diagnosis and management (2015)

DFTB - PARIS in the autumn (2018)

DFTB - Bronchiolitis guidelines (2018)

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