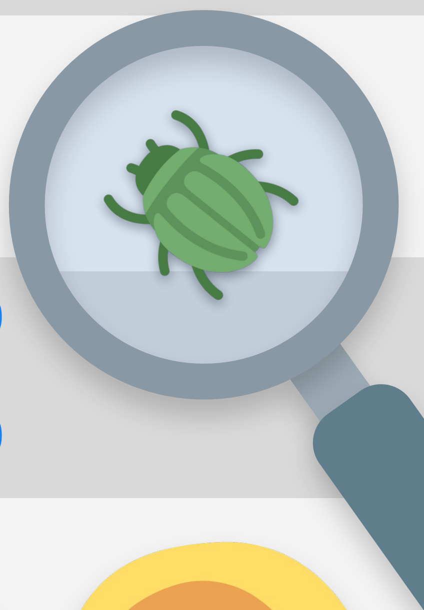
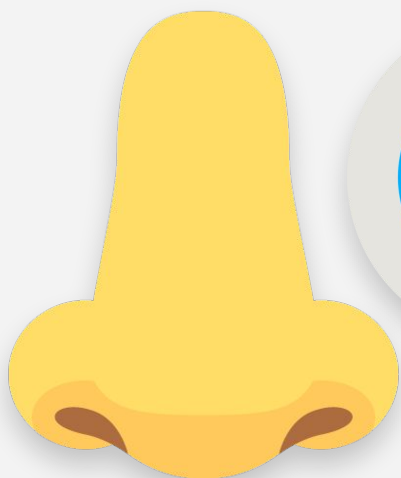
THE *Paediatric* FOREIGN BODY GAME





by Dr Jennifer Mann

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#EM3

INSTRUCTIONS

1. Consider the following 10 cases.
2. After reading a case, decide which option to choose and why.

Leave it in.
Reassure the family.

You take it out in Children's ED.

Try to take it out.
If not tolerated, consider leaving in.

Removal requires specialist involvement.

3. Discuss reasoning as a group.
4. Consider where you would look for advice and guidance.
5. One point per right answer (keep track of your scores).

HAVE FUN!

PATIENT CASE 1

Emma (aged 3) put some decorative stones in her mouth about one hour ago. Her parents think she may have swallowed some. Emma has no symptoms.

You order a radiograph...

THE ANSWER?

Leave it in. Reassure the family.

Refer to the ED Investigation of an Oesophageal/ GI foreign body for guidance. Relevance to this case:

Asymptomatic
Not >5cm
Not sharp
Not button battery/magnet

Foreign body likely to be radiopaque

Radiopaque = stops x-rays (i.e. will be grey to white depending on material)

Radiolucent = doesn't stop x-rays and therefore will not be seen on radiograph

Chest X-ray

Below diaphragm

Narrowest points are thoracic inlet and the lower oesophageal sphincter

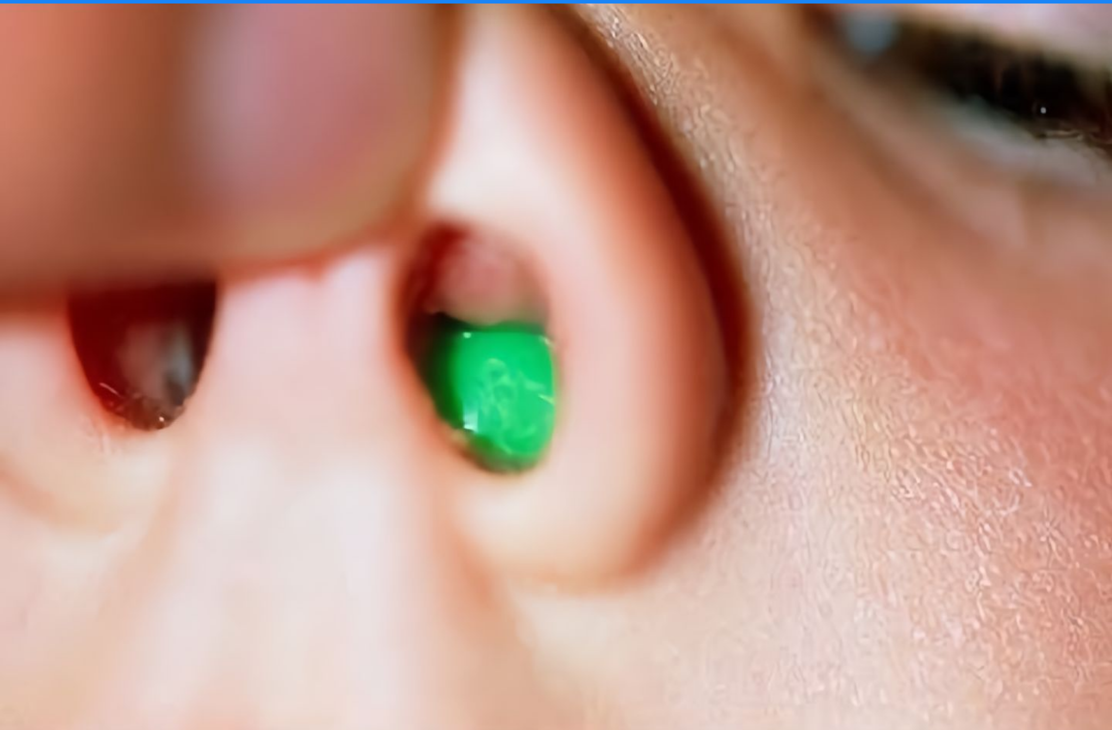
Reassurance
Return if symptomatic
Don't need to search stool!

Symptoms would be those of bowel obstruction:
Vomiting, pain, abdo distension, not opening bowels

PATIENT CASE 2

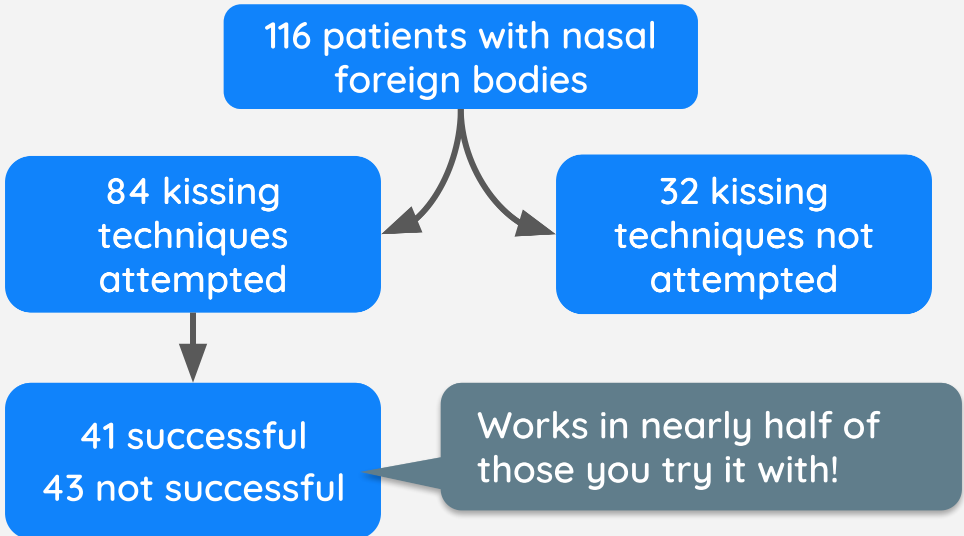
Thomas (aged 3) was playing with Play-Doh at home earlier today. His mother saw him roll up a piece of green Play-Doh and insert it into his left nostril.

When you go anywhere near Thomas he screams hysterically and covers his nose with his hand.



THE ANSWER?

Try to take it out.
If not tolerated, consider leaving in.



BMJ 2010 J. Acheson LRI Paeds ED

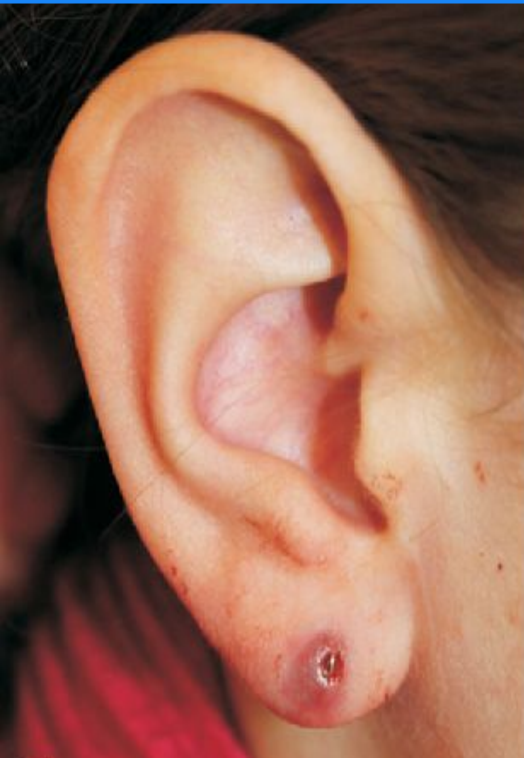
Plan B if not successful:

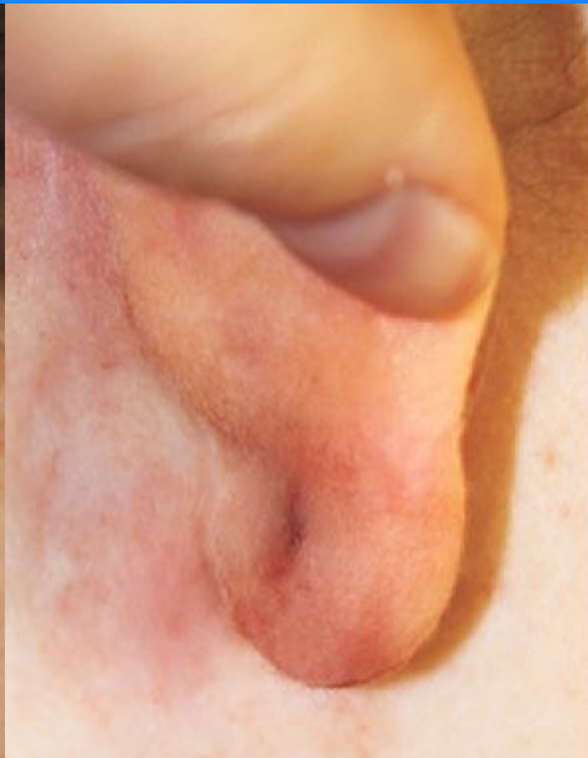
1. ET Suction catheter
2. Crocodile forceps
3. Hook

STOP and THINK!
Risk of leaving vs trauma and distress. Play-Doh likely to crust and fall out. Discuss with ENT if further removal attempts required. If not, home with advice to return if signs of infection - bleeding, discharge or odour!

PATIENT CASE 3

Ruby (aged 16) pierced her own ears a month ago. She has come to the Children's ED as her earlobe is red, swollen and tender. She is unable to remove the earring. The back of her ear is swollen and you can only see part of the piercing.





THE ANSWER?

You take it out in Children's ED.

Technique likely to depend upon age & cooperation of child. Options available would be:

1. Analgesia (Entonox)
2. Anaesthesia (topically with Ametop or local infiltration)
3. Remember to involve the play specialists!

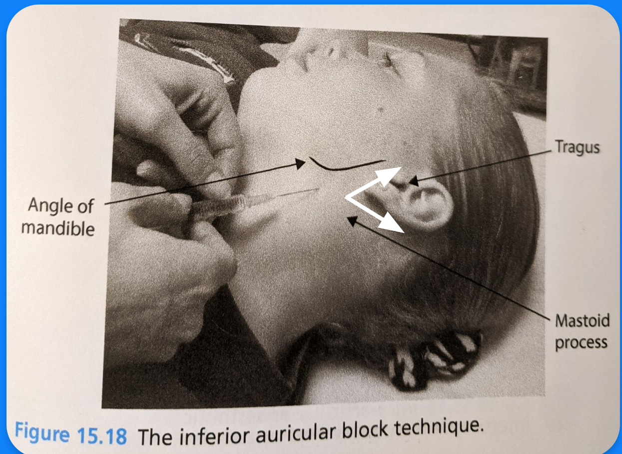


Figure 15.18 The inferior auricular block technique.

- The auricular nerve supplies the lower half of the pinna.
- Lie the child down and clean the area.
- Inserting a blue needle at the angle of the mandible 1 cm below earlobe attachment to face.
- Instil 2-3 ml 1% lignocaine anterior to the tragus.
- Instill 2-3 ml behind the ear towards the mastoid.

Give a course of oral antibiotics if signs of infection and advice not to reinsert earring until completely healed.

PATIENT CASE 4

Jack (10 months old) is brought in by ambulance. He was crawling on the floor 45 minutes ago when mum saw him put a sweet wrapper in his mouth. After this, his breathing became noisy and mum called 999. When Jack cries, mum says she can see the wrapper stuck in his throat.

Jack is distressed. His breathing is noisy. Saturations 97% in air, RR 50, HR 160 with recessions noted.

THE ANSWER?

Removal requires specialist involvement.

Follow the Critically Unwell Child Guideline

Keep the child and parent calm

Upper airway obstruction may worsen with agitation.

Move to ER
No unnecessary tests/ repeat examinations

Monitor closely and as tolerated with nearby airway trolley.

Urgent discussion with teams above

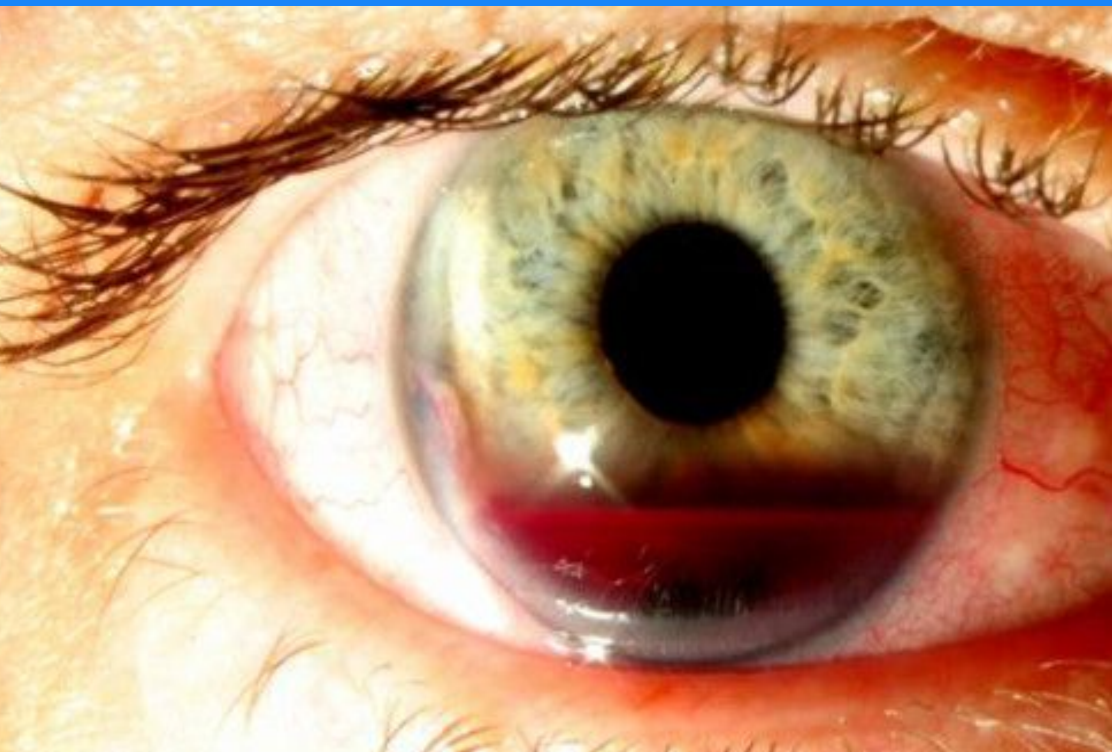
Move to an area for removal safely

This will likely be theatres. Transfer with emergency grab bag and portable suction.

PATIENT CASE 5

Amber (aged 13) was helping her dad with DIY and was holding some metal sheeting whilst he cut it with a power tool. She was not wearing eye protection. She felt a sudden pain in her right eye.

Her eye is sore, she has photophobia and her vision is blurred.



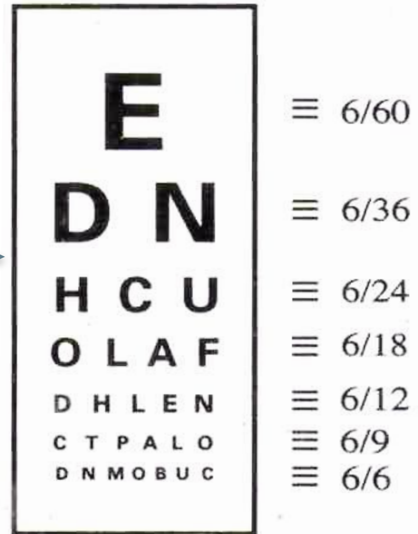
THE ANSWER?

Removal requires specialist involvement.

Examination should include visual acuity – chart in dept.

Top number is always distance they were standing (6m).

Bottom number is distance someone with normal (6/6) vision would be standing to see same line (i.e. 6m).



Blood in the anterior chamber of the eye is called Hyphema and is suggestive of penetrating or blunt trauma to the eye causing bleeding from iris or vessel. This needs urgent ophthalmology assessment so call them.

Hyphema can cause raised intraocular pressure. They are likely to be admitted for a period of observation and bedrest, further imaging to confirm foreign body and surgical removal.

Eye injuries are incredibly painful and distressing for children. Ensure they have adequate analgesia.

PATIENT CASE 6

Helen (aged 9) is brought to the Children's ED with a splinter of wood under her fingernail she got after mucking out the stables for her horse.

You clean her finger and remove half of the wood using forceps whilst she uses Entonox, but there is still half of it left over which you cannot grab the end of.

THE ANSWER?

Try to take it out.
If not tolerated, consider leaving in.

Potential techniques to try in the ED:

1. Soak in warm water and use gentle pressure from nail base to try and move splinter upwards then use tweezers.
2. With a compliant child and some Entonox if needed, insert a needle and syringe with saline under the nail alongside splinter and try to flush out.

The body's natural response is to expel foreign bodies.

Small remaining pieces of splinter should be left alone. Most wood softens to a pulp after a few days and will come out with a bead of pus.

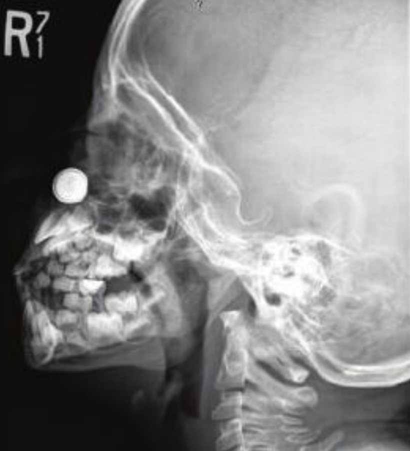
Advice to give parents if small splinters remaining:

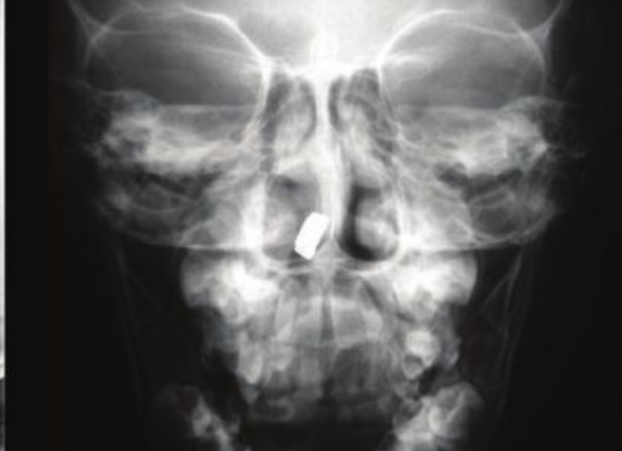
1. Allow child to soak hand in bath and use nail brush gently.
2. Soak hand in warm bowl of water with 1 teaspoon baking powder twice a day.
3. Tell parents to return if signs of infection.

PATIENT CASE 7

Sam (aged 3) arrives in Children's ED with a sudden onset nosebleed. His mum tells you that when she looked up his nose at home she thought she could see some kind of metal object up there.

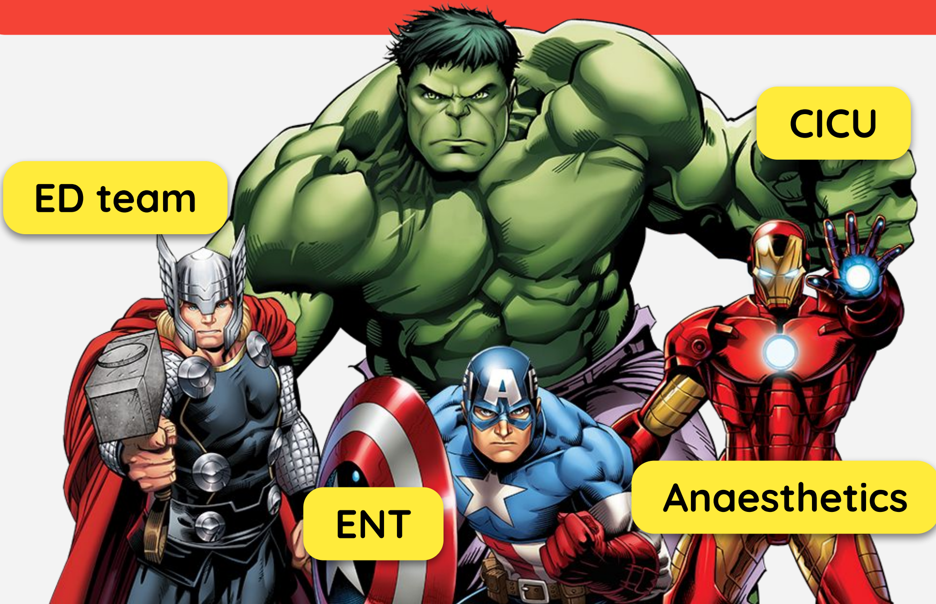
You order a facial radiograph…





THE ANSWER?

Removal requires specialist involvement.



Follow the Button Battery Ingestion/Insertion Guideline

Keep the child and parent calm

Risk dislodgement into airway/gut with agitation.

Move to ER

No unnecessary tests/ repeat examinations

Monitor closely and as tolerated with nearby airway trolley. IV access and CXM.

Urgent discussion with teams above

Move to an area for removal safely

This will likely be theatres. Transfer with emergency grab bag and portable suction.

PATIENT CASE 8

Damian (aged 6) comes to the ED with his mum. He swallowed the head of his sister's favourite Lego character 3 days ago during an argument.

His mother has been checking his stool and is concerned it does not seem to have passed.

THE ANSWER?

Leave it in. Reassure the family.

‘Everything is Awesome: Don’t Forget the Lego!’

Damian Roland and 5 other paediatricians ingested a Lego head to establish the Found and Retrieved Time (FART score) and whether any complications occurred.

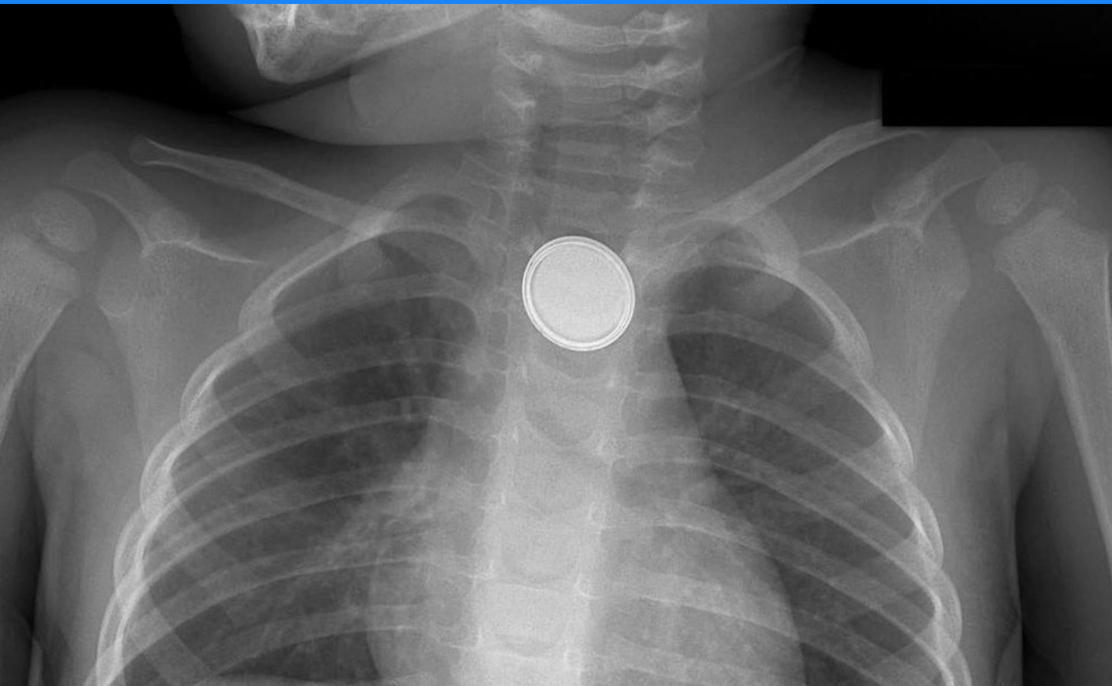
FART score averaged 1.71 days. No complications occurred. Conclusion that no parent should have to search through their child’s faeces to prove object retrieval.

Journal of Paediatric Child Health (2019)

PATIENT CASE 9

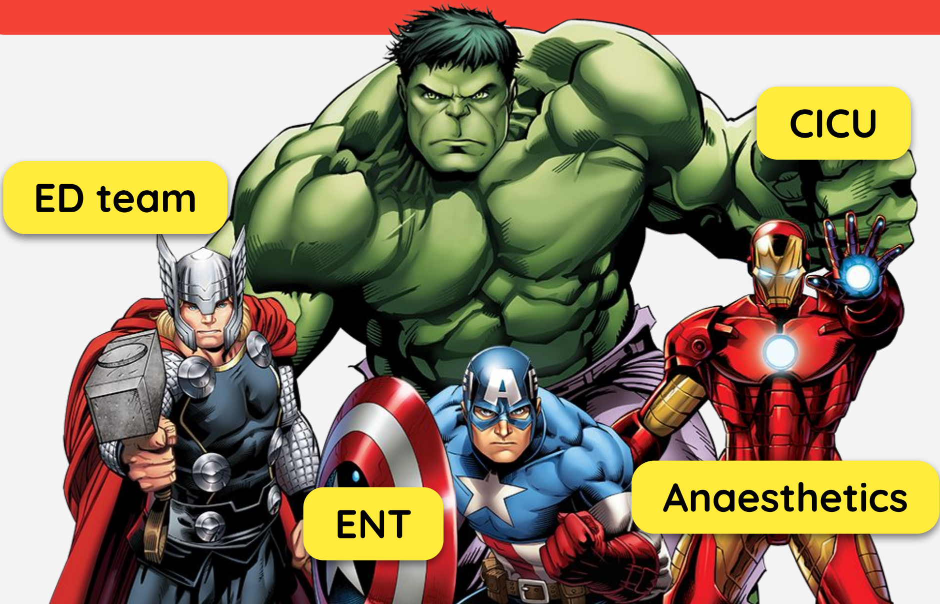
Oliver (aged 4) is brought in by his dad to the Children's ED as he was seen taking something out of a drawer and putting it in his mouth. He thinks it was probably a £2 coin. Oliver is currently playing and happy.

You order a radiograph to visualise the position. **When he returns from x-ray, Oliver vomits blood.**



THE ANSWER?

Removal requires specialist involvement.



Follow the Button Battery Ingestion/Insertion Guideline

Keep the child and parent calm

Move to ER

No unnecessary tests/ repeat examinations

Monitor closely and as tolerated with nearby airway trolley. IV access (x2) and urgent CXM 10ml/kg.

Consider TXA.

Urgent discussion with teams above

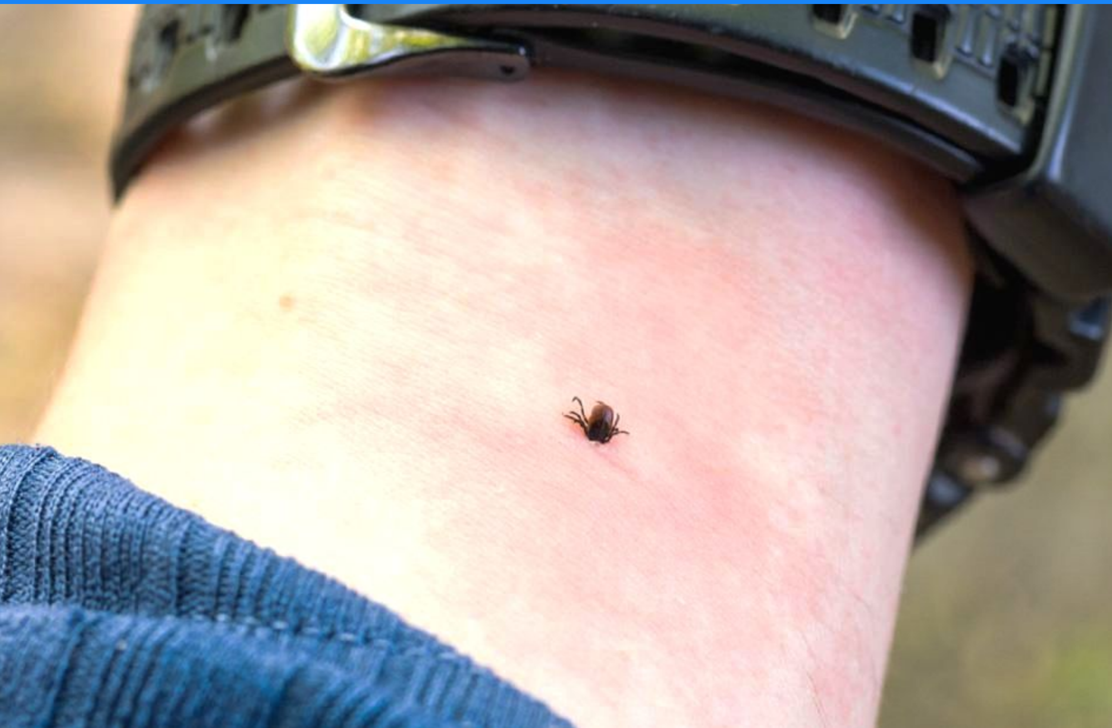
Move to an area for removal safely

Alert Theatre Coordinator. Transfer with emergency grab bag and portable suction.

PATIENT CASE 10

Elijah (aged 16) has been riding his bike in the park and comes to the Children's ED with a lesion on his arm which he has only noticed today.

When you examine him there is a small amount of surrounding redness and the lump has small legs and is partially burrowed into the skin.



THE ANSWER?

You take it out in Children's ED.

Tick's are relatively common. Found in woodland areas and use wildlife such as deers,foxes, hedgehogs and mice as hosts. Disposable tick remover tools for in room 25. Slide along skin surface and pull up and away. No further acute treatment needed.

Prevention advice is to wear long sleeved tops and tuck socks into trousers when in long grass/woodlands.

Lyme disease is a bacterial infection carried by some ticks. Usually appears within 4 weeks of bite, may be up to 3 months. Confirmed with serology.

Treated with Doxycycline >9yr, Amoxicillin <9yr (see NICE for duration). Flu symptoms may occur, rarely causes Bell's Palsy.