Don't Forget The Bubbles

GENITOURINARY SYMPTOMS IN YOUNGER CHILDREN

Facilitators Guide

Author **Helena Winstanley and Tara George**
(Edits by the DFTB Team)
fellows@dontforgetthebubbles.com

Topic: **Paediatric Genitourinary Presentations**
Author: **Helena Winstanley and Tara George**
Duration: **Up to 2 hrs**
Facilitator level: **ST4 and above**
Learner level: **FY1 and above (can be adapted depending on the level)**
Equipment required: **A doll to demonstrate examination position and a willing volunteer to act as a concerned parent for a role play exercise.**

OUTLINE (USE THE SECTIONS THAT ARE RELEVANT FOR YOUR LEARNERS)

- Basics (10 mins)
- (2 x 15 minute) case discussion covering the key points and evidence including an optional practical session (10 mins) covering paediatric genital examination
- Advanced session: (2 x 20 minutes) case discussions covering more complex areas, diagnostic dilemmas; advanced management and escalation
- Quiz (10 mins)
- Infographic sharing (5 mins): 5 take home learning points

We also recommend printing/sharing a copy of your local guideline (if available) for sharing admission criteria.

PRE-READING FOR LEARNERS

Expectation is for the learners to have understood the basics before the session. They should be encouraged to listen to the podcast and/or read the article below.

General Paediatric Gynaecology - 20 minute podcast
https://www.emrap.org/episode/emrap2019/pediatricpearls

Gynecology for the Paediatrician
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2791551/

BASICS (DOES NOT NEED TO BE INCLUDED BUT FOR INFORMATION IF IT COMES UP IN DISCUSSION)

PAEDIATRIC GENITOURINARY PRESENTATIONS: SUMMARY

Paediatric GUM is an area that has the potential to cause significant distress to both parent and the child, it is often a clinical area in which clinicians feel underskilled and potentially embarrassed or uncomfortable.

Parents or carers may be very worried about the possibility of sexual abuse and Children and young people may feel anxious or embarrassed about discussing their symptoms and having to undergo a physical examination.

Clinicians may be anxious due to (often) a relative lack of training in this area and the potential sensitivity of the situation.

There are relatively few genitourinary symptoms - typically pain, discharge, bleeding and itching. The majority of cases will be due to mild self-limiting conditions such as vulvovaginitis but the clinician must always be aware of the possibility of more serious problems such as a retained foreign body or sexual abuse.

The underlying cause varies between age-groups because children become susceptible to specific conditions as they progress through childhood.

- Pre-pubertal girls have an oestrogen poor environment which leads to vaginal tissue that is more friable and sensitive than that seen in pubescent/post-pubescent girls. This makes them more susceptible to conditions such as vulvovaginitis.
- Sexually transmitted diseases - whilst sadly not unheard of in young children - are much more common in teenagers and should be high on the list of differentials in a young person who presents with gynaecological symptoms.
- Retained foreign bodies may occur in younger children exploring their bodies for the first time or in teenagers who are starting to experiment sexually.
- Straddle injuries are usually seen in nursery/primary school aged children - classically whilst attempting to climb out of a bath.
- Sexual abuse, whilst a comparatively rare cause of gynaecological symptoms should always be considered at any age - bearing in mind this may present differently in different age groups.

ASSESSMENT OF A CHILD PRESENTING WITH A GENITOURINARY PROBLEM INVOLVES:

• Using sensitivity and tact to elicit the history as always. However, we risk perpetuating stigma, shame and embarrassment if we take the history in a secretive or different way just because it involves genitalia. Care should be taken wherever possible to allow the child/young person to tell their story independently of the parents or carers. If there's any possibility of abuse in the history, the right person needs to be taking the first history as if there is any chance of a prosecution, the child needs not to be retelling the story and compromising evidence (and also minimising distress for the patient).

• Obtaining a comprehensive history including duration of symptoms, continence issues, precipitating factors and not forgetting more subtle signs such as change in behaviour.

• Exploring the concerns of the family who may be extremely anxious and come with preconceived ideas surrounding the diagnosis.

• Examining the child/young person (with an appropriate chaperone) to look for any obvious skin changes, discharge/bleeding or external signs of trauma. Aim to examine the child just once with necessary senior/specialist staff present and any equipment ready prepared in order to minimise distress. Appropriate use of a parent's lap and a play specialist are often invaluable.

• Considering the possibility of sexual abuse - including child sexual exploitation.

Referral for urgent assessment in secondary care should be considered if the child is:

• Presenting with a clear history of a retained foreign body
• Systemically unwell
• Actively bleeding
• Suspected of being maltreated.

Referral to the gynaecology team, if available, should be arranged (the urgency depending on clinical judgement) if:

• There is a suspicion of a retained foreign body.
• A child has symptoms that have failed to resolve with conventional treatment.
• There is uncertainty about the diagnosis.
• Examination under anaesthesia is likely to be required.

A child aged 3-10 years who presents with soreness and itching to the vulva/vagina is most likely to have vulvovaginitis. This can usually be safely managed in the ED/ UTC/primary care with advice and education for the child and family:

- Girls should be taught to wipe front to back after using the toilet
- Cotton underwear should be worn if possible
- Avoid wearing pants at night
- Salt water baths and nappy creams (eg Bepanthen or Sudocrem) may be helpful to ease the irritation
- Avoid bubble baths and sitting for a prolonged time in soapy water. Parents should be encouraged to wash the affected area in plain water.

Underlying conditions such as constipation, UTI or threadworm infection should be considered and treated where necessary. Vulval swabs may aid diagnosis of a bacterial cause, most commonly group A strep but remember skin commensal contaminants are common and the majority do not have bacterial infection.. Children whose symptoms are not resolving despite the above measures should be referred to secondary care.

Specific conditions that may be covered in more detail, depending on time available:

Vulvovaginitis - https://adc.bmj.com/content/archdischild/88/4/324.full.pdf

Straddle injuries - https://www.rch.org.au/clinicalguide/guideline_index/Straddle_injuries/

Retained foreign bodies - https://www.childrens.com/specialties-services/conditions/foreign-body
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3634203/

Child sexual exploitation - https://www.nspcc.org.uk/what-is-child-abuse/types-of-abuse/child-sexual-exploitation/

CASE 1 (15 MINS)

Alysha is a very distressed six year old girl who attends A&E with her mother. She has blood in her pants following an accident in the park.

Discussion Points:
Some questions to further discussion:

How will you approach this case? What are your priorities?

- Need to calm the child down
- Analgesia
- Reassurance
- Distraction
- Play specialist if available
- Obtain a history from both mother and daughter
- What was the mechanism of injury?
- Was the event witnessed?
- Are there any areas of concern in the history?
- How much is she bleeding?
- Has she been able to pass urine since?
- Examine the child to ascertain the extent of the injury and the degree of blood loss.

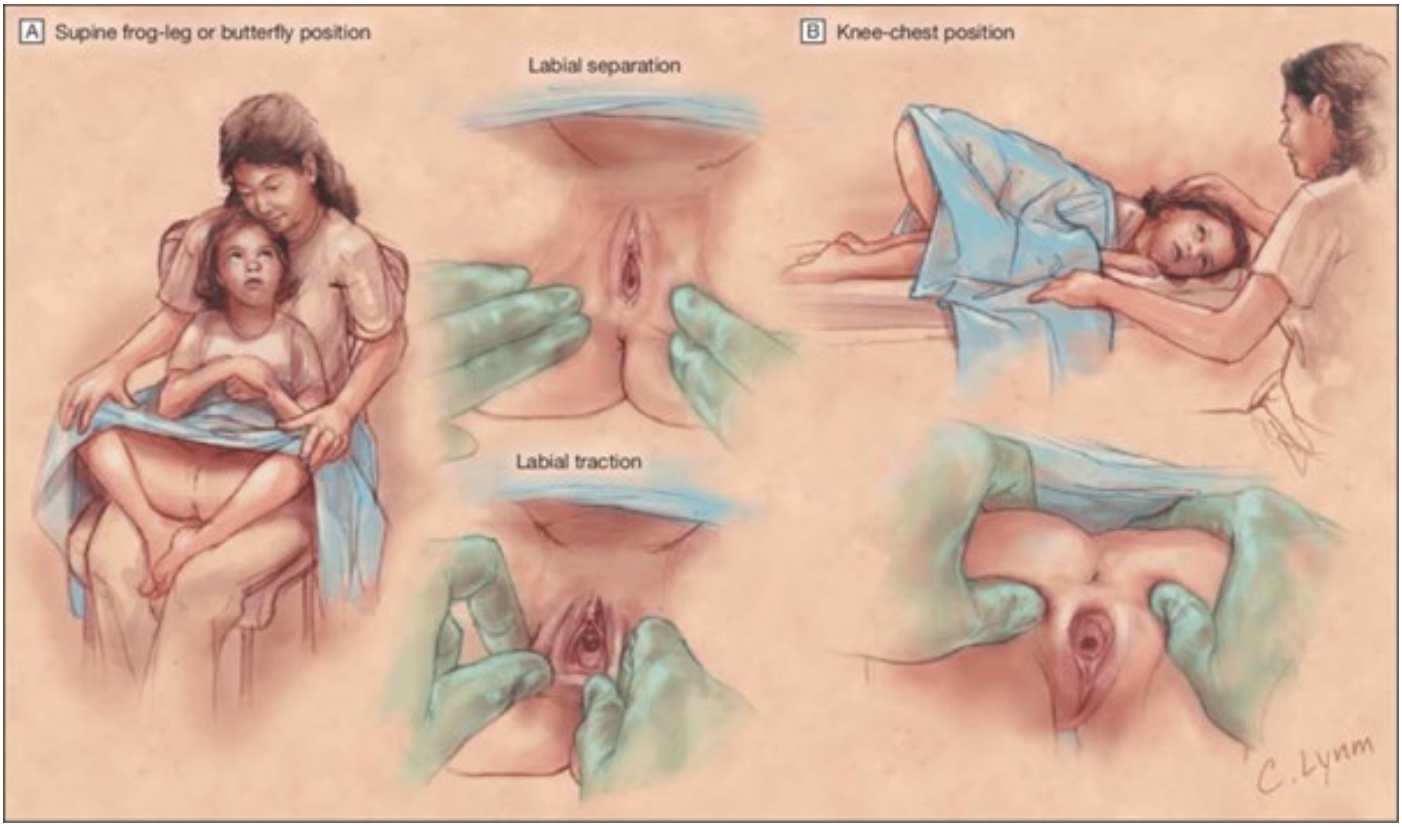
You find out that Alysha was on a family outing to the park. She was riding her big brother's bike and fell off, landing astride the crossbar. She has been complaining of severe pain to her vulval area since. There was a small amount of bleeding initially but mum thinks this has now stopped.

You explain that you will need to examine Alysha to assess her injuries fully. She is very frightened the examination will hurt and is refusing to cooperate. Her mother suggests that if you were able to demonstrate exactly what you need to do she may be more compliant.

Using a doll, demonstrate and explain to Alysha and her mother exactly how you will examine her.

- There are a variety of positions that you could use to help you examine Alysha.

The diagram below demonstrates some of them.



• Alysha may feel calmer and more in control if you allow her to show you what is the matter by asking her to part her labia for you.
• Make sure you use a sheet or a blanket to preserve her modesty.

Alysha is now calmer and is happy for you to proceed but would like something to make sure it doesn't hurt.

What are your options?

• Simple analgesia
• Distraction therapy utilising the play therapy team
• Entonox - helpful as an anxiolytic as well as an analgesic
• Intranasal diamorphine
• Ketamine (may be necessary for young children especially if there is concern about significant injury - in which case consider asking the gynae team to attend also)

After your fantastic preparation, the examination proceeds easily and you determine that there is minor laceration in between at the posterior fourchette on the right. It is not actively bleeding, there is no suggestion of urethral/clitoral damage and it does not encroach on the introitus.

You conclude that it is safe for Alysha to go home without any further intervention after she has passed urine in the department to be sure she is not at risk of urinary retention. Her mother would like some advice on how to manage at home and what to look out for.

What should you tell her?

- Simple lacerations usually heal well without any long term consequences
- It is important that Alysha is able to pass urine regularly - if the vulva is really sore she might be reluctant to urinate due to pain - it may help to urinate into a bath of bidet of tepid water or to pour water from a jug over the area whilst she is urinating.
  - Simple analgesia is advisable to keep her comfortable
  - Salt water baths (lukewarm water with 4 tablespoons of salt into the bath) will help with comfort and hygiene.
- It will look as if there is blood in her urine for a few hours or even days - this will be as the urine passes over the healing graze, this is normal and only of concern if there is urinary retention or heavy new bleeding.

CASE 2 (15 MINS)

Olivia, a 5 year old girl, is brought to the urgent treatment centre when her mother finds some yellow discharge with a streak of blood in her pants. Her mother has noticed she is 'scratching her privates' and is worried something might have happened to her at her new primary school.

Discussion points:
Some questions to further discussion:

What are the differential diagnoses in this case?
How would you refine your diagnosis further?

- The differential is broad at this stage although the most likely diagnosis is vulvovaginitis. The clinician must also consider threadworm infection, bacterial (e.g. streptococcal) infection and more serious causes such as abuse.

- A detailed history should be elicited from both the mother and child.
Factors such as personal hygiene, constipation and use of bath additives should be enquired about. Changes in behaviour may also be significant.
Consider asking the child about the possibility of a foreign body - young children may sometimes experiment (although they will not always remember or disclose the fact).

- It is important to directly address the mother's concerns - this may need to be done without the child present. What exactly is she worried about, does she have anything specific that is making her concerned? Has the child made a disclosure?

- The child will require an examination including abdomen, groin and external genitalia. Don't forget to examine the anus as well. A chaperone should be used and, if available, a play specialist.

- If there is discharge present you may consider taking a swab to look for evidence of bacterial infection

A thorough history establishes that Olivia is systemically well but has been complaining of itching for the past three weeks. Since going to school she is no longer supervised to use the toilet and admits she only 'sometimes' washes her hands afterwards.
On examination you find that the vagina and labia are erythematous with a small amount of discharge. There is also some evidence of excoriation around the anus.

Given these findings, what do you think is the most likely diagnosis?
What will you do now and what advice will you give to the family?

- The most likely diagnosis is vulvovaginitis secondary to threadworm infection.
- The whole family will require treatment with a single dose of Mebendazole - this may need to be repeated in two weeks time. Mebendazole can be bought over the counter at a local pharmacy
- The family will need to follow strict hygiene measures for six weeks after treatment to prevent re-infection. A good summary of measures can be found here - https://www.nhsinform.scot/illnesses-and-conditions/stomach-liver-and-gastrointestinal-tract/threadworms#treating-threadworms

- Olivia will need to be reminded to wash her hands after every bathroom visit.
- The vulvovaginitis will likely improve with treatment of the threadworms but advice such as avoiding bubble bath and wearing cotton underwear will help.
- A simple nappy cream may make the excoriated area more comfortable

ADVANCED DISCUSSION (20 MINS PER CASE)

This is an opportunity to cover more complex areas, diagnostic dilemmas and advanced management and escalation if there are more experienced trainees or senior registrars in your group.

ADVANCED CASE 1

Inez is a 6 year old girl who is brought to ED by her parents with a two month history of vaginal discharge. They have seen the GP repeatedly and have been told that she is suffering from vulvovaginitis. Despite carefully doing everything their doctor recommended there has been no improvement in her symptoms and they are becoming increasingly frustrated.

Discussion points:
Some questions to further discussion:

How will you approach this case?
What are some of the differentials you will need to consider?

- Try to set realistic expectations - if a condition has persisted for two months, it is less likely that a single visit to ED will provide a definitive solution.
- As in every case like this, a careful history from parents and child is important including what treatments have already been tried.
- A collateral history from the GP (if available) will be hugely beneficial including any concerns the practice may have about the family.
- Factors that may lead to a resistant case of vulvovaginitis need to be considered including threadworm, constipation, UTIs and bacterial infection e.g. staphylococcus.
- Alternative diagnoses include a retained foreign body and sexual abuse.

You manage to speak to Inez's GP who confirms she has seen her a number of times. Initially she was treated for simple vulvovaginitis but as it failed to improve she has sent vaginal swabs and urine MC&S. The vaginal swab grew a mixture of bacteria so Inez received a course of antibiotics which resulted in only a temporary improvement.

What symptoms might suggest a retained foreign body?
How might you proceed now?

- Offensive vaginal discharge which may be blood stained, persistent vaginitis, urinary symptoms, abdominal pain may all occur with a retained foreign body.
- Inez should be directly questioned about the possibility of a foreign body whilst taking care to reassure her she is not in any trouble.
- She requires examination including looking at the introitus for any evidence of a foreign body.
- If a foreign body is visible and the child is sufficiently compliant, gentle irrigation with saline may be enough to remove a small object.
- If the diagnosis is in doubt, ultrasound may be of some use although a normal ultrasound does not rule out a foreign body.
- Examination under anaesthesia is likely to be required if there is significant concern - especially if the foreign body has been retained for some time (as is likely in this case). Prolonged local irritation may make removal more difficult due to the formation of granulation tissue. In rare cases the foreign body may gradually perforate through into the abdominal cavity.
- Unless there is a clear history from Inez that she inserted the item herself as part of a game or exploration the treating team need to have a very low threshold for involving the departmental safeguarding lead.

ADVANCED CASE 2

Gabriella is a 3 year old girl. She attends the ED with her mother. Her mother is distraught and tells you that Gabriella was at her grandparents' house today while mum was at work. It's the school holidays and several cousins are at the grandparents house today including Brandon, the 13 year old great nephew of Gabriellas's stepgrandad who has never met Gabriella before. The grandparents rang her to pick up early as Gabriella would not stop screaming and was very very distressed after going inside to the toilet. Gabriella has told her mother that she doesn't like Brandon and he hurt her today. Gabriella is sad and withdrawn clearly in pain but clearly heard to say "he putted his finger in my bum and I don't like that".

Discussion points:
Some questions to further discussion:

How would you feel if presented with this scenario?

- It is absolutely right that you may feel anxious, upset or even out of your depth here.
- This child may well be presenting with CSA and you need to alert the most senior person on your shift/safeguarding lead.
- Dealing with cases of abuse is emotionally challenging and draining.
- This could be a good time to talk about how we deal with emotional scenarios at work and explore different strategies.

What are you worried about?

- Opportunity to explore their understanding of child sexual abuse as well as to talk about consultation skills to facilitate disclosure/rapport building and the practicalities of such a presentation.
- Chain of evidence and need for the most senior doctors and nurses to be involved and to follow departmental safeguarding policy.

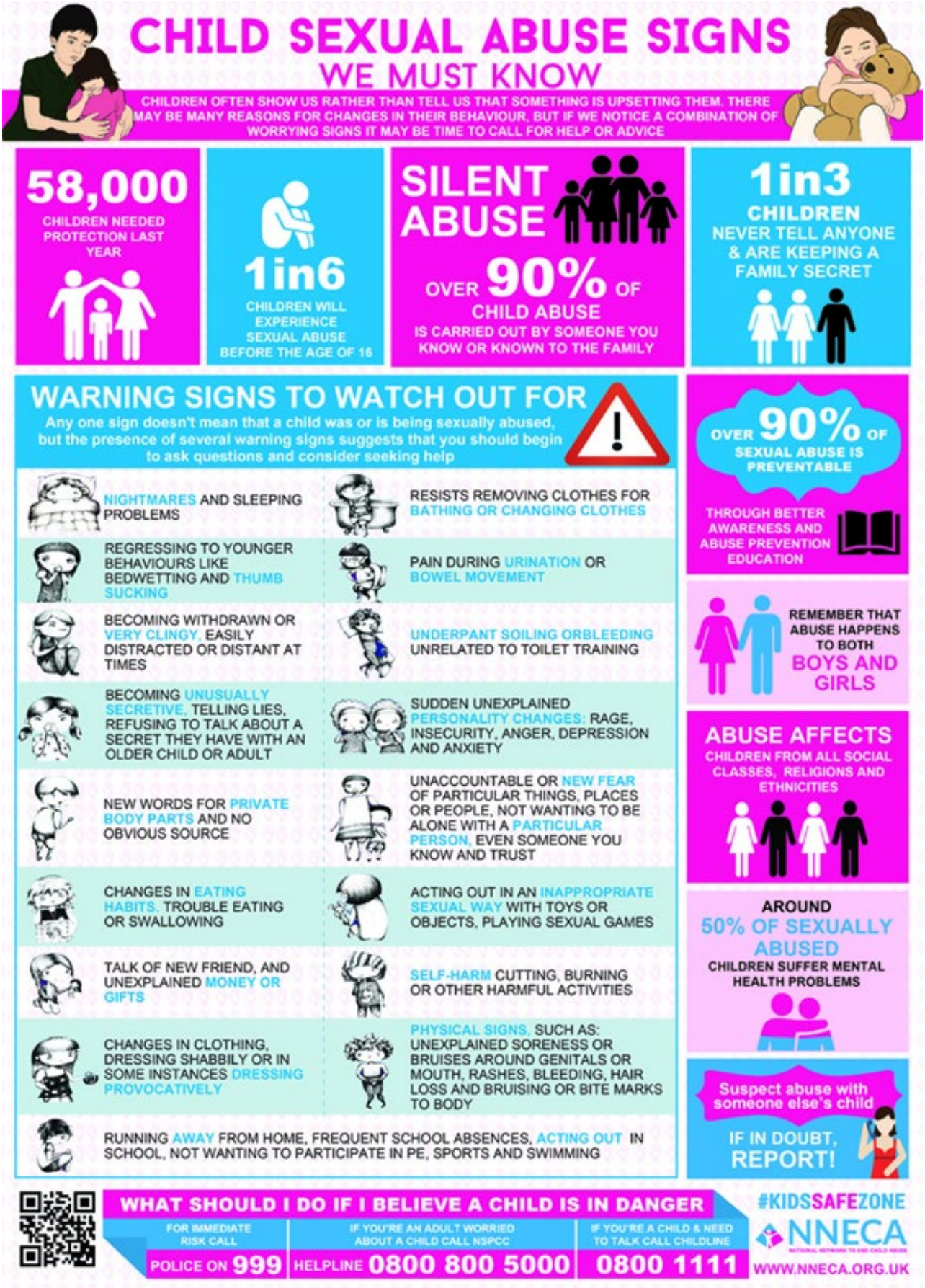
What are your next steps in managing this child?

- These cases can potentially be very complex - involve your seniors asap.
- We need to focus on Gabriella but also remember her mother - she is likely to be shocked/distressed and will need supporting through this episode too -

who will do this? What skills might you/they need?

- Your team need to have a very low threshold for involving social services -

Gabriella is likely to need a full child protection medical - **what is your departmental policy on this? How in practical terms do you arrange this?**



QUIZ QUESTIONS (10 MINS)

Question 1.

Which of the following is NOT typical of vulvovaginitis?

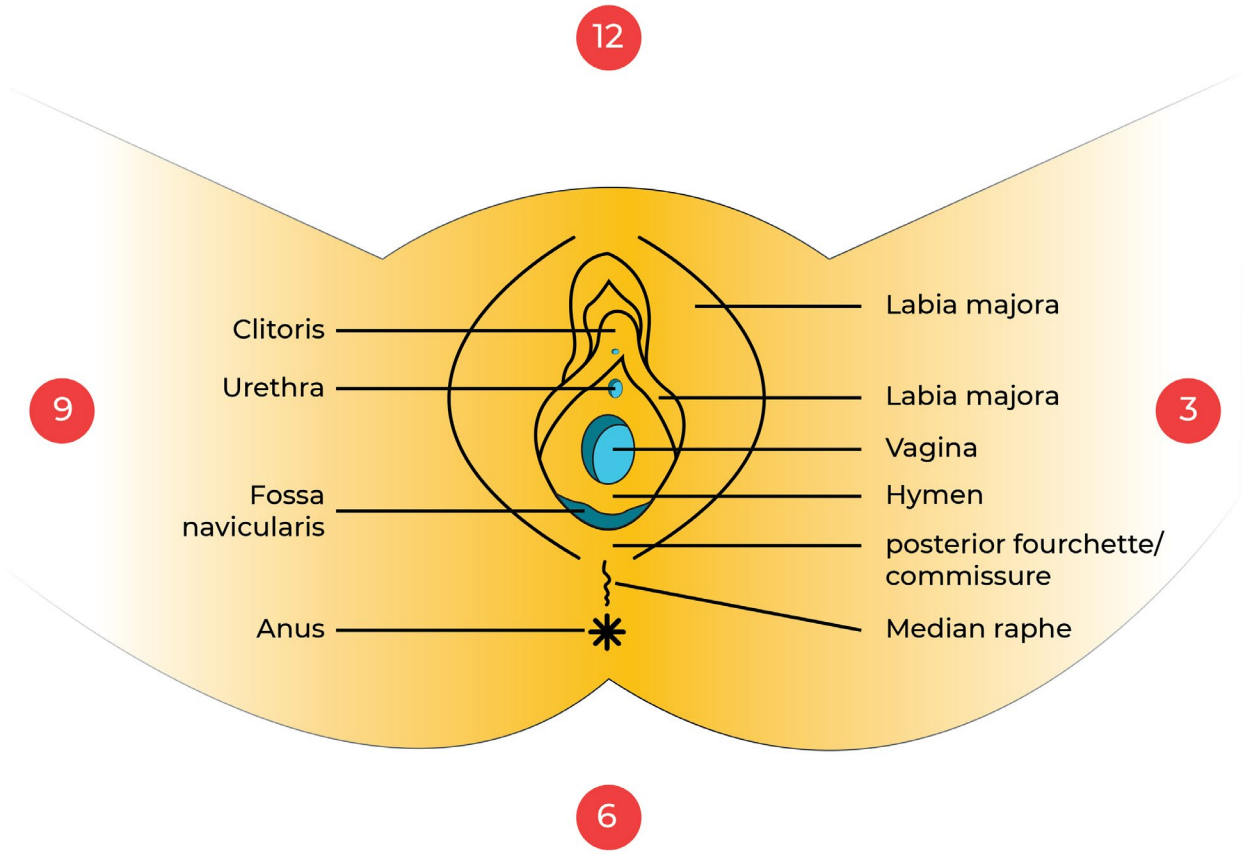
A. Vaginal itching
B. Offensive discharge
C. Vaginal soreness/discomfort
D. Erythema
E. Dysuria

Answer: B) Although discharge is a common symptom in vulvovaginitis, it is not usually offensive. Its presence should raise suspicions of a retained foreign body or bacterial infection.

Question 2.

When managing a straddle injury, laceration involving which areas would you likely feel confident managing without need for gynaecology referral?

A. Labia minora, clitoris and urethra
B. Labia majora, minora and introitus
C. Clitoris, introitus and Labia minora
D. Labia minora, majora and posterior fourchette



Answer: D) If the laceration is not actively bleeding and does not involve the clitoris, urethra or vagina it is likely that conservative management will be sufficient. However, if there is any doubt, senior/specialist opinion is vital.

Question 3.

In a straddle injury, what form of analgesia may be appropriate?

A. Entonox
B. Diamorphine
C. Simple analgesia
D. Ketamine
E. All of the above

Answer: E) The form of analgesia used will be dependent on the degree of injury, age of child, amount of distress and the need for detailed examination.
Don't forget vital adjuncts such as play therapists, iPads/phones and especially bubbles!sufficient. However, if there is any doubt, senior/specialist opinion is vital.

Question 4.

Which of the following does NOT exacerbate vulvovaginitis?

A. Urinary tract infection
B. Bubble bath
C. Threadworm
D. Obesity
E. Synthetic underwear

Answer: A) Whilst dysuria may occur in both UTIs and vulvovaginitis, having a UTI does not in itself exacerbate vulvovaginitis. Anything that increases moisture (obesity, synthetic underwear, tight clothing) or irritates the delicate tissue (bubble bath, soap, antiseptics) can cause inflammation.

Question 5.

Which of the following statements are TRUE?

A. Child Sexual Abuse only happens to vulnerable young people eg those in care.
B. If a young person consents to sex then it is not a crime.
C. There will usually be obvious signs that a child is being abused.
D. CSE can happen on line as well as in person.
E. A child may be being exploited even if they feel they are in a loving relationship.

Answer: D&E) CSE can happen to any young person. Those who are extra vulnerable in some way eg in care, parents with addictions/severe mental health problems may be more at risk but anyone can be affected.
One of the tragedies of CSE is that young people are often conned into believing they are in a loving relationship and may be reluctant to accept they are being abused. It is still a crime however.

The signs of CSE may be subtle and may often be mistaken for normal teenage behaviour. A high index of suspicion is required.
A young person can be groomed both on line or in person. Sometimes the abuser may target the young person on line first, then move to in person abuse.

Finish

1. infographic of the take home tips (5 mins)
2. Good preparation is key to a successful examination.
3. In cases with offensive or blood stained discharge consider a retained foreign body.
4. The majority of straddle injuries involve bruising/lacerations to the labia. These will usually heal well with conservative management.
5. CSE can be difficult to spot but an index of suspicion should be maintained when dealing with young people who present with genitourinary symptoms.

References

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Straddle injury

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fellows@dontforgetthebubbles.com