Suspected Vaginal / genital Bleeding Prepuberty Is it sexual abuse ?

Ruth Skelton

Designated Dr Bradford

7yr Amy

GP rings

7 yr Amy presents with bright red blood on pants.

no other concerns.

OE prepubertal

- Most likely cause
- Could it be a period?
- How likely is sexual abuse?

What to do

1st question

Is there blood . Is it blood ?

- Tomato sauce ?
- Factitious ?

Examine when bleeding

2nd Question

Where is blood coming from / is this PV?

From anus / anal laceration

Causes of suspected vaginal bleeding

Accidental Trauma

- Accidental
  - Blunt: straddle injury
  - Penetrating

Accidental injuries

Usually

- Clear history / witness
- Context
- asymmetrical and doesn't affect hymen
- Penetration rare
- Scooters/ crayons

Vulvovaginitis

Due to:

- Anatomy of vulva
- High vaginal pH / different bacteria pre-puberty

Bacterial infection

Bowel organisms, H influenzae, Strep

Often non-specific or no growth on swabs

Alder Hey Study of girls through ED with VV

> 200 in 1 yr Bacteria in small number

Prepubertal girls rarely get candida

Vulvovaginitis

Possible differentials

- Worms
- Sensitivities - fabric conditioners, washing powder
- Dermatological Conditions
- Over cleaning

Discharge; “there all the time” / “comes and goes”

Vulvar soreness and redness, lichenification

Vulvovaginitis treatment options

Explanation. how it happens, will improve when get oestrogen

Hygiene advice

Emollient/barrier

?salt baths – salt is an antiseptic; no harm but little evidence

?antibiotics – only if specific bug

?short course mild steroid

NOT oestrogen cream. recurs

NOT antifungals in prepubertal

BritSPAG

Vulvovaginitis – when to worry

Blood stained / Offensive smell

Very painful

Other “clues” to sexual abuse (eg enuresis, behaviour,) , CSE

Persisting

Full examination other problems

STI “screen”

Vaginal Foreign body

Causes

- innocent ; hygiene 60-75% toilet paper +/- hair
- toddlers shuffle around without nappies / young child wiping themselves.
- Inserted FB in an older girl **unusual.** Raises concern about abuse .

Presentation - discharge, bleeding, smell, abdo pain haematuria, blood, anal symptoms, incidental finding

EUA w gyane / forensic examination for CSA

Lichen Sclerosus

Bruising and contact bleeding

hypopigmented area **Figure 8**

painful & itchy or asymptomatic

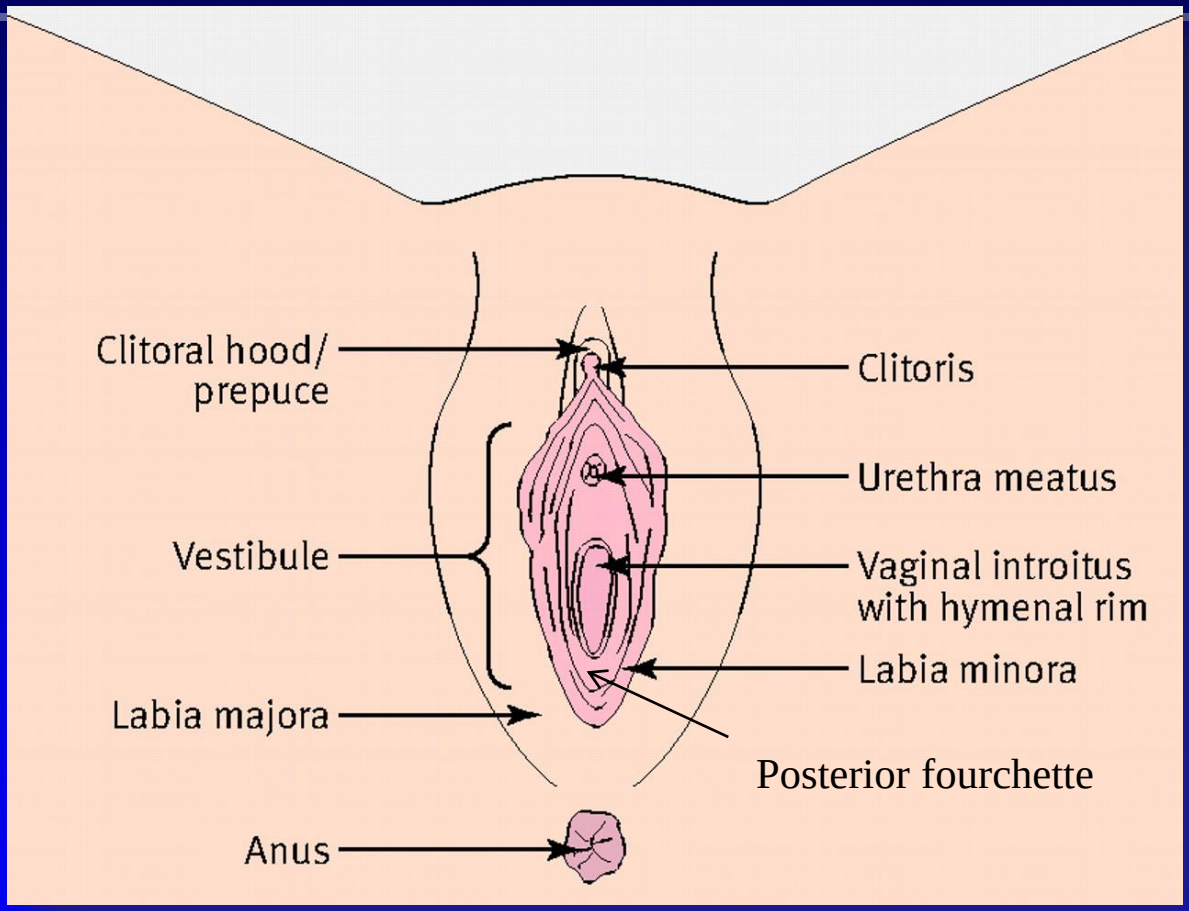
DD mistaken for abuse.

If unsure dermatology +/- biopsy

Treat high dose topical steroids

Can improve at puberty

Where is blood coming from



Sarcoma botryoides

Aggressive malig tumour

< 5 years age

Bleeding, pain, discharge

Rare : Tumours / masses

Urethra - prolapse

Vulva – haemangioma / wart

Vagina cervix sarcoma botryoids, adenosis, polyp

Adnexal granulosa cell tumour, gonadoblastoma, teratoma

Rectal prolapse

7yr Amy PV bleed

bright red blood on pants no other concerns.

3 episodes over 3 months “spotting”

OE - tanner stage 3-4

Breast development

Pubic hair

Tall

Precocious puberty

2ry sexual characteristics <8 menarche < 10

Bone maturation / growth

Us endometrium

Central – pituitary tumour

Peripheral:

ovarian cysts / tumours /mcune albright

adrenal tumours / cah

hypthyroid

Diagnosis precocious puberty

refer endocrine

Hormone profile

- TFT
- LH FSH high central cause
- Oestradiol, peripheral cause
- Testosterone / DHEAS adrenal
- GnRH stimulation test

Pelvic US / Mri head / Bone age

Mcune albright

- Polyostotic fibrous dysplasia
- Café au lait (coast of main not california – rough borders)
- Pseudo precocious puberty - ovaries -> oestrogen
- FSH LH low

7yr Amy PV bleed

bright red blood on pants no other concerns.

3 episodes over 3 months “spotting”

OE

No signs puberty

? Period

Isolated premature menarche:

Episodic bleeding no secondary characteristics

? Insensitivity of endometrium to oestrogen however us normal endometrium

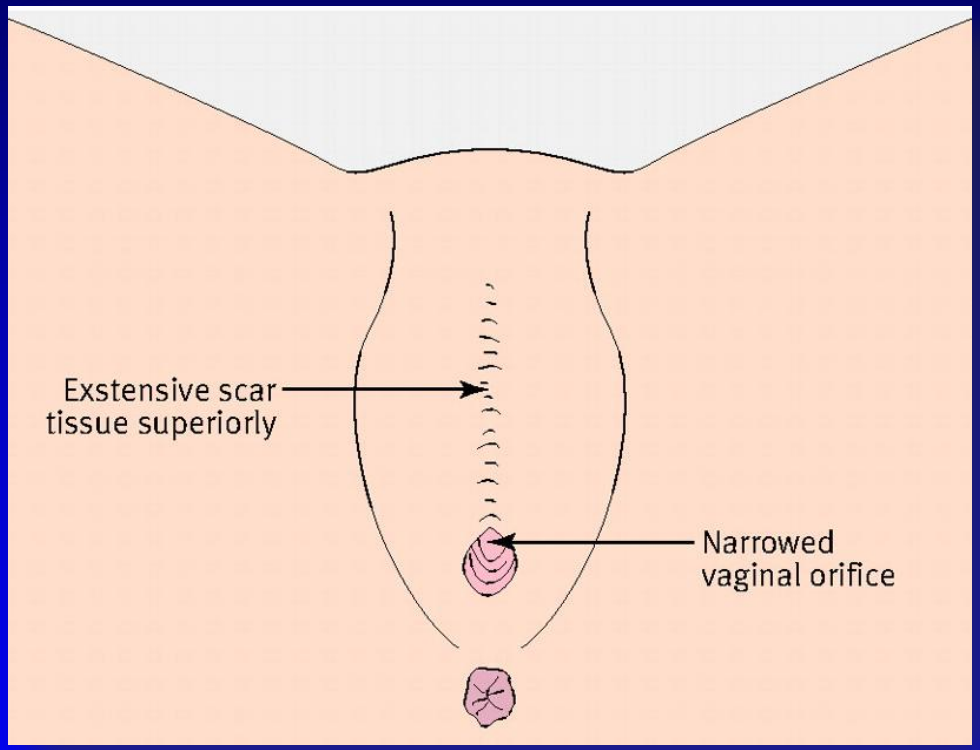
? Low Pulsatile LH /abnormal pit/ gonadal imbalance

Diagnosis IPM

- Full Hormone profile
- Pelvic US Mri head
- Bone age
- EUA for FB / rare tumour
- ??? Exclude CSA

Diagnosis by exclusion

? Different from CSA / unexplained pv bleed


Exstensive scar
tissue superiorly
Narrowed
vaginal orifice

WHO: Type III

? Rare

FGM

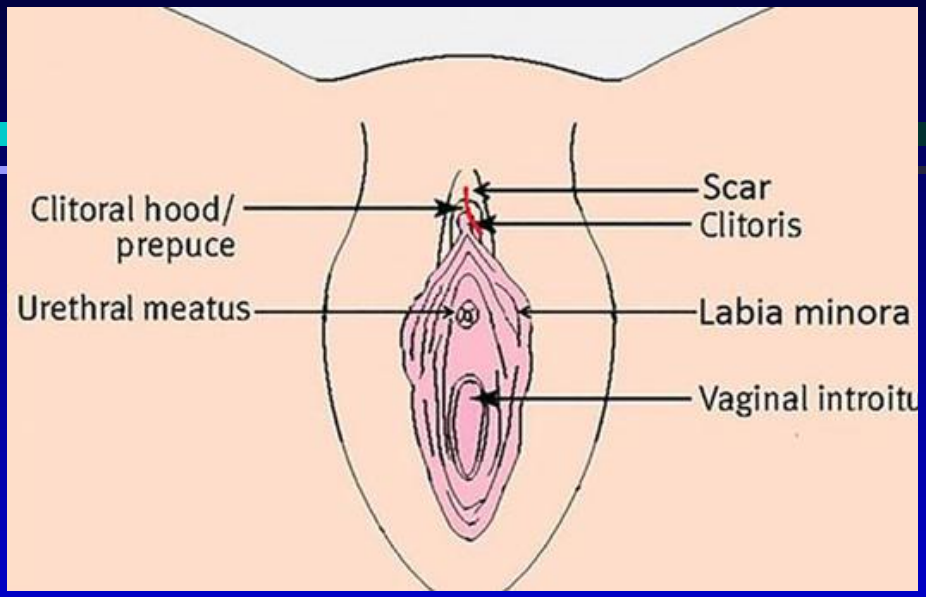
FGM type 4

Hard to detect

Cutting

pricking, scraping

cautery



Some practices eg Labia pulling / stretching
not usually considered FGM unless an injury occurs

Piercings

Sexual abuse

Acute assault – abrasion laceration,

history / other signs

Eg thigh bruising

NB may heal within 2 days (literature 7 days)

Urgent exam

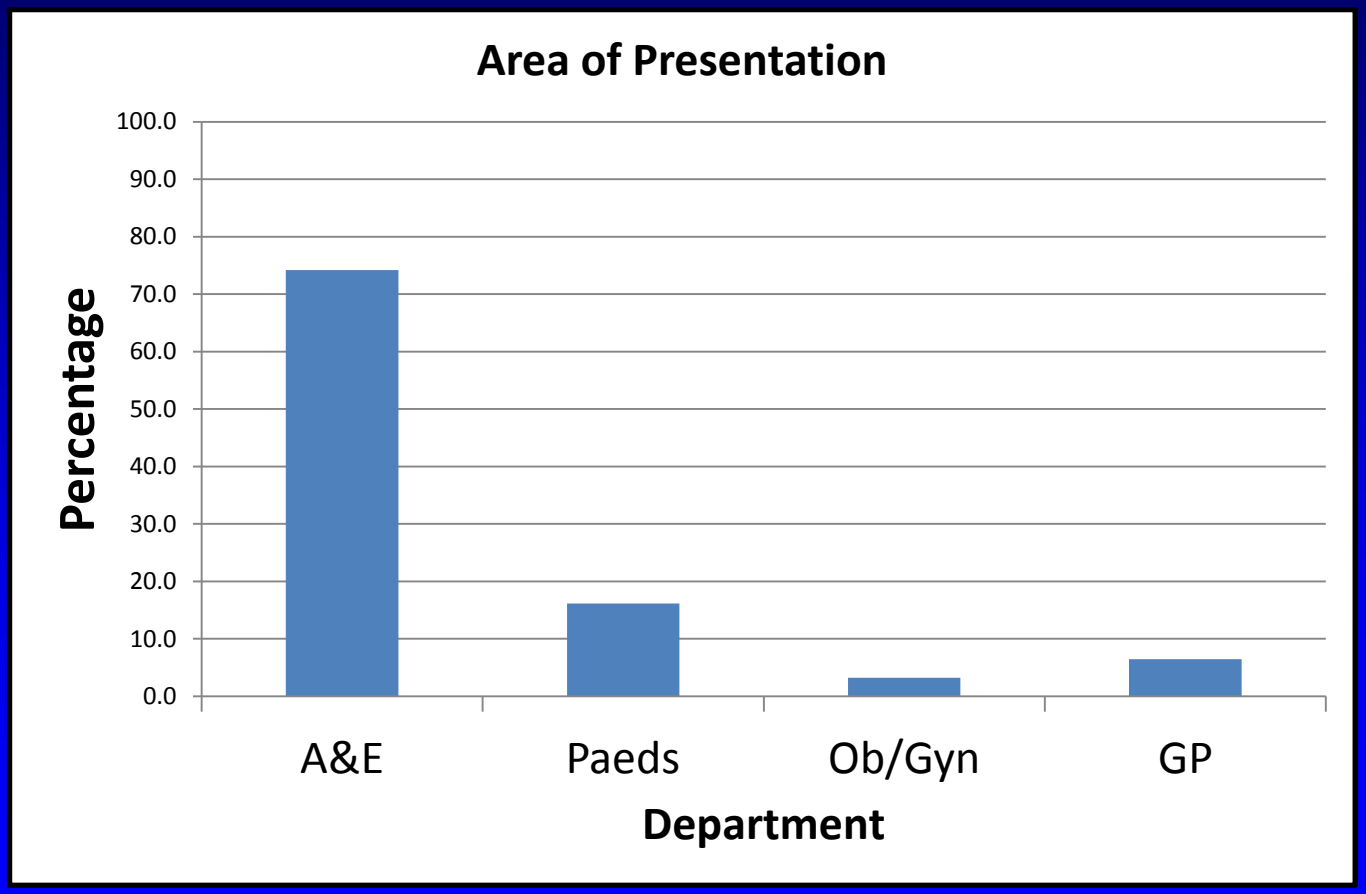
MBChB
SS4

UNIVERSITY OF LEEDS

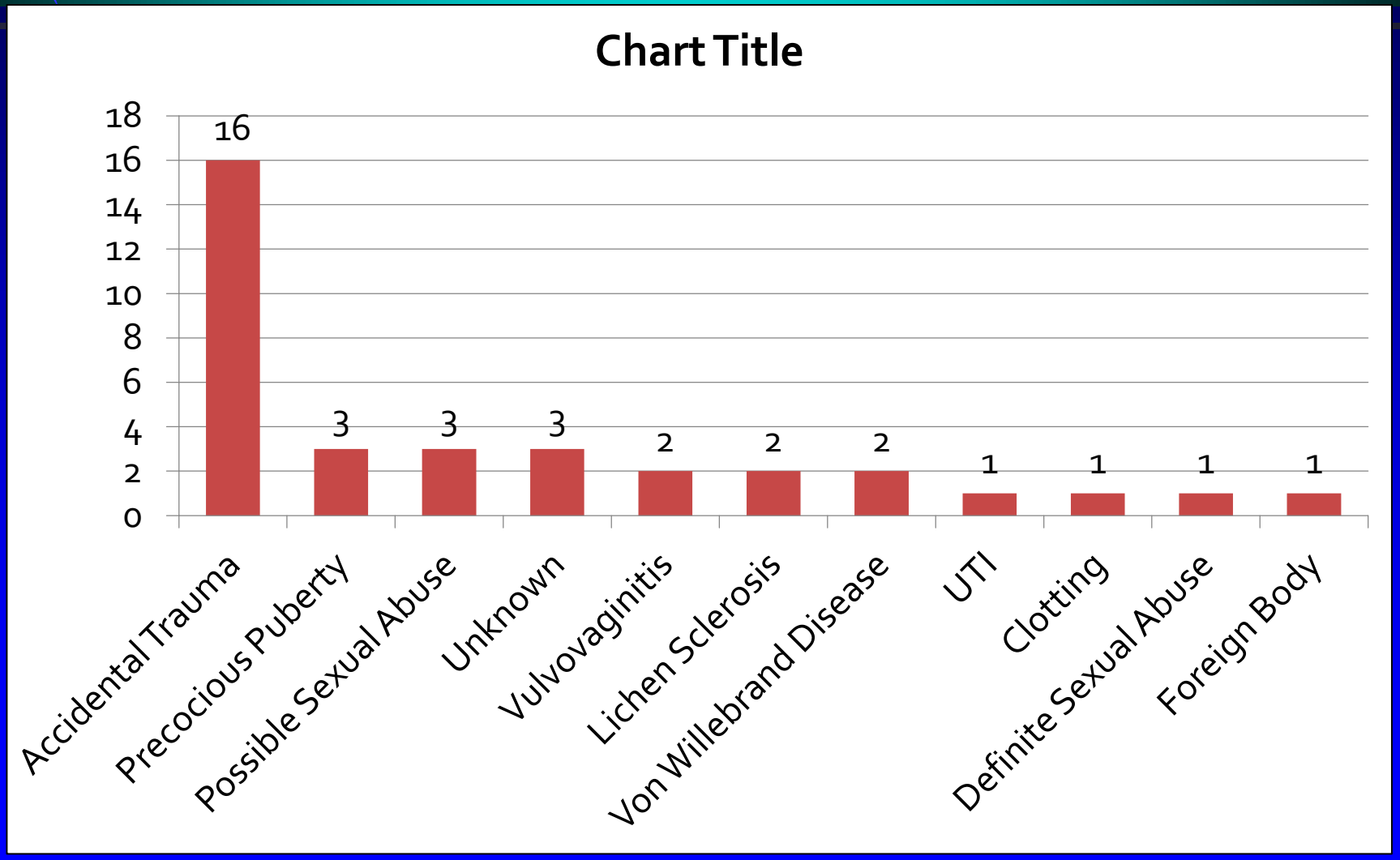
What are the causes of vaginal bleeding in prepubertal children?

Chloe Pemberton, Jemma White, Sarina Rashid and Kevin Phillips.

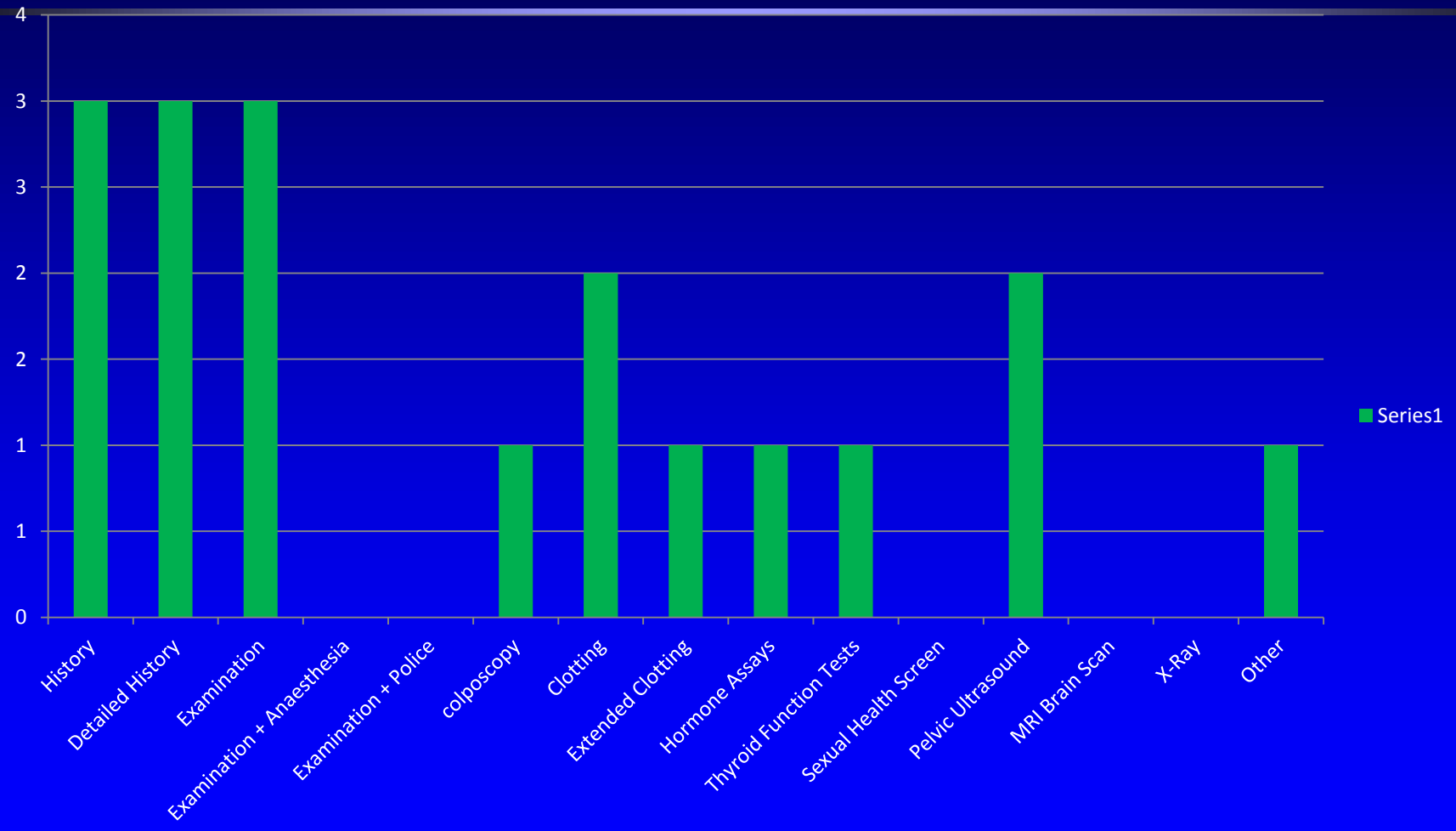
Presentation - No 31



Causes of Vaginal Bleeding



Unknown


4
3
3
2
2
1
1
0
History
Detailed History
Examination
Examination + Anaesthesia
Examination + Police
colposcopy
Clotting
Extended Clotting
Hormone Assays
Thyroid Function Tests
Sexual Health Screen
Pelvic Ultrasound
MRI Brain Scan
X-Ray
Other
Series1

Clotting

Von Willebrand 2 cases

UTI and factor VII deficiency 1

1 NEW AETIOLOGY

Literature

- Rare as presentation but ? inadequate investigations
- VWB, platelet dysfunction, factor V

Comparing the Literature:

	Heller 1978	Hill 1989	Imai 1996	David 1984	Aribarg 2003	Streigal 2006	Ugboma 2007	Herman-G 1994	**2012**
No	51	52	62	33	55	13	68	12	31
Vulvovaginitis	6%	6	45	30	2				**6**
Genital Tumour	12	**21**	14	18	9	**46**			
Foreign body			5	30	22	15	15	100	**3**
Precocious puberty	**72**	**21**	14	3	13				**8**
(McCune Albright)	17								
Urethral Prolapse		10	10		2		**50**		
Trauma	6	8	10		**31**		11		**46**
Sexual abuse	**2**				**9**	**15**	**13**	**66**	**3**
Suspected sexual abuse							fgm4		**8**
Dermatological		10							**6**
Hormone withdrawal					13				
Vaginal prolapse	2								
Granulosa cell tumor		6							
Transitory			5						
clotting									**6**
UTI									**3**
Unknown		25	11	19			1		**8**

Approach to PV bleeding

Suspected PV Bleeding causes

Common

- Not pv bleeding : UTI, anal / rectal bleeding constipation, **IBD**
- skin disorder – eczema, lichen sclerosus vulvovaginitis, over zealous hygiene and irritation
- common infection eg strep, haemophilus,
- accidental including straddle injuries
- No cause found

PV Bleeding: Causes

Less common

- Foreign body. Toddler accidental /older child concerning
- Bleeding disorder (rare as presenting)
- menstrual /miscarriage
  - ie child is post pubertal
  - Premature menarche (rare but described)

PV Bleeding: Causes

Less common

- **Abuse**
  - Deliberate (abusive) physical injury
  - sexual abuse / sexual transmitted infection
  - FII factitious. Child or parent fabricating /exaggerating

PV Bleeding: Causes

Rare

- Recent FGM ?? How rare
- Vaginal tumours / haemangioma, (rare)
- Endocrine tumour ovarian / pituitary
- endocrine : hypothyroidism, CAH, McCune Albright
- **leeches** or other parasitic infections

Post pubertal ; associated with periods / pregnancy / miscarriage

PV bleeding history

Is it blood

Where is it coming from

Trauma?

Flags for abuse / SH

Blood : How often, Type, Other bleeding

Associated discharge, pain, Itch

Other symptoms bowels, urine

Changes in behaviour

FH/

PV bleeding – Examination

Full examination

See at time of bleeding

Paediatrician

Forensic provider

Unexplained bleeding

Paediatrician v Forensic

NO flags for CSA→ General Paediatrician

for site of bleeding /medical causes /assess bleeding,

Flags for CSA → SC /police → Forensic

Acute bleeding needing medical intervention

Forensic considerations in parallel

PV bleeding : Investigations

Depend on History, Examination, Context

None

Possible investigations include

- Urine MC&S
- FBC, U&E LFT Clotting screen **including VWD screen**
- Vulval swab MC&S if erythema / discharge
- STI screen (NAAT testing) ? With GU
- Background check Social Care
- ? EUA / colposcopy

Investigations recurrent bleeding

Recurrent / cyclical bleeding/ signs of puberty:

refer endocrine and / or

- Hormone profile –TFT FSH LH oestradiol, testosterone / DHEAS
- Ultrasound uterus ovaries/ pelvis.
- ? MRI head bone age
- GT stimulation

On going bleeding / associated with discharge

follow up ? EUA for ?FB / polyp / tumour

Summary

- Approach child with suspected PV bleeding from paediatric perspective
- CSA not common but consider
- Full assessment for paediatric causes
- NO CSA flags ? General paediatrician
- Need audit of causes of PV bleeding

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Herman-Giddens (1994): Vaginal foreign bodies and child sexual abuse: *Archives of paediatric and adolescent medicine*: 1994 48(2) 195-200.

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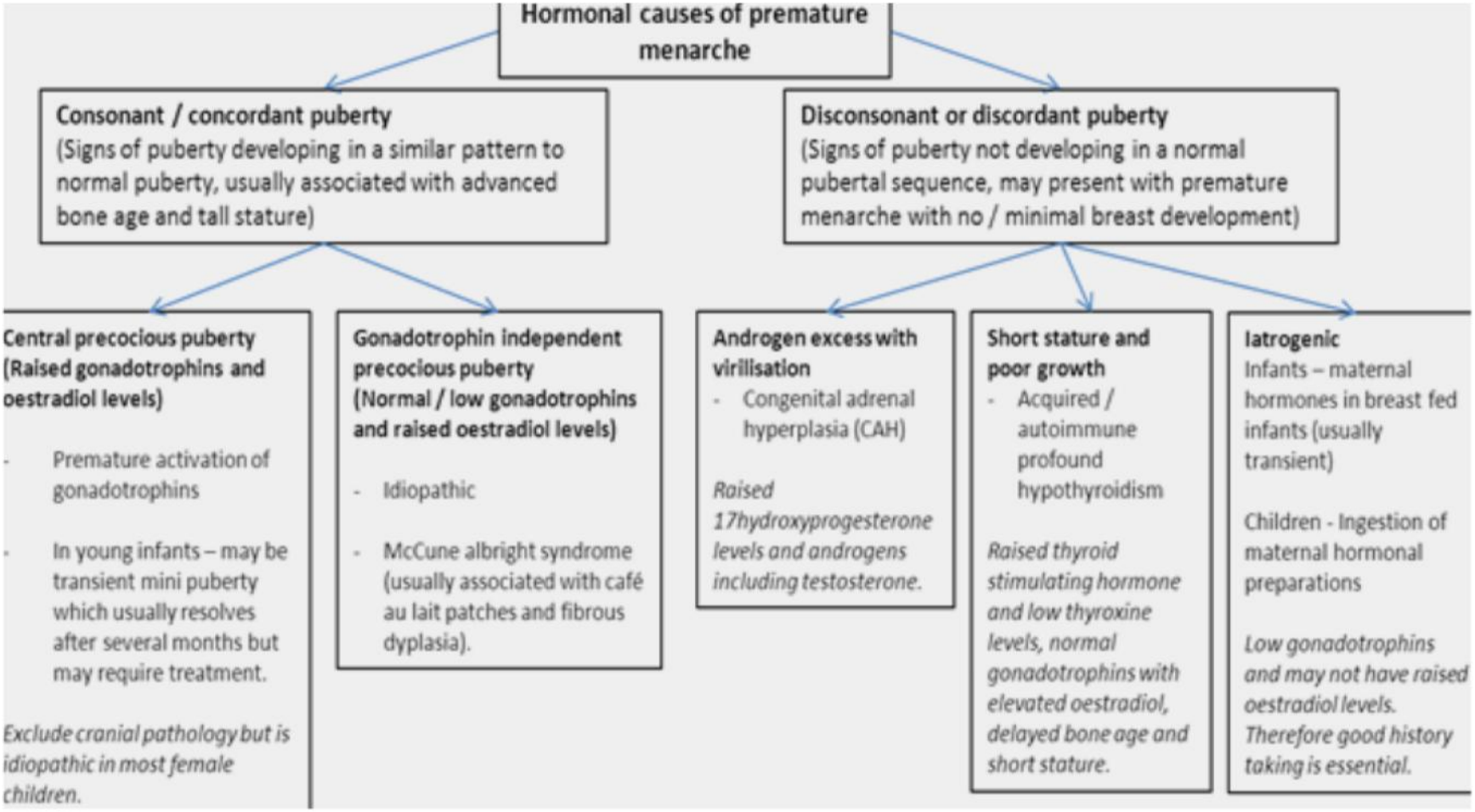
- Gonadotropin pulsatile secretion in girls with premature menarche horm res 1990 33 5-10 Saggese G etc al


Hormonal causes of premature menarche
Consonant / concordant puberty
(Signs of puberty developing in a similar pattern to normal puberty, usually associated with advanced bone age and tall stature)
Disconsonant or discordant puberty
(Signs of puberty not developing in a normal pubertal sequence, may present with premature menarche with no / minimal breast development)
Central precocious puberty
(Raised gonadotrophins and oestradiol levels)
- Premature activation of gonadotrophins
- In young infants – may be transient mini puberty which usually resolves after several months but may require treatment.
Exclude cranial pathology but is idiopathic in most female children.
Gonadotrophin independent precocious puberty
(Normal / low gonadotrophins and raised oestradiol levels)
- Idiopathic
- McCune albright syndrome (usually associated with café au lait patches and fibrous dyplasia).
Androgen excess with virilisation
- Congenital adrenal hyperplasia (CAH)
Raised 17hydroxyprogesterone levels and androgens including testosterone.
Short stature and poor growth
- Acquired / autoimmune profound hypothyroidism
Raised thyroid stimulating hormone and low thyroxine levels, normal gonadotrophins with elevated oestradiol, delayed bone age and short stature.
Iatrogenic
Infants – maternal hormones in breast fed infants (usually transient)
Children - Ingestion of maternal hormonal preparations
Low gonadotrophins and may not have raised oestradiol levels. Therefore good history taking is essential.