Clinical education:

Vaginal discharge

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MSHC
MELBOURNE SEXUAL HEALTH CENTRE

Objectives

- understand the vaginal ecology over the life span
- understand the common causes, STI causes and non-infectious causes of vaginal discharges
- assess a woman who presents with vaginal symptoms

Vaginal Ecology

- changes over the life span under the influence of oestrogen
  - premenarche
    - Coliforms; Staph ssp; Strep ssp.
    - alkaline pH 7.0
  - reproductive Age
    - Lactobacilli dominant state
    - acidic pH </= 4.0 to 4.5
  - menopausal
    - loss of lactobacilli > mixed bacterial flora
    - alkaline pH >4.5

Causes

- most common
  - Bacterial Vaginosis
  - Candida ssp.
- STI
  - *Chlamydiatrachomatis*
  - *Neiserria.gonorrhoea*
  - *Trichomonas.vaginalis*
  - *Mycoplasma genitalium*
  - HSV

- non infective
  - foreign body
  - cervical polyps
  - hormonal Factors
    - cycle variation
    - pregnancy and lactation
    - hormonal contraception
  - irritant dermatitis
  - malignancy

Symptoms

- *alteration in Vg DC from what the woman perceives as normal*
  - how is it different to normal?
  - onset and duration
    - intermittent > cycle related?
    - recurrent
  - amount, colour and consistency
  - odour

Associated Symptoms

- itch and rash
- ulcers
- pain/tenderness
- dysuria

- lower abdominal pain
- dyspareunia
- abnormal uterine bleeding

Other Considerations

- diabetes
- recent antibiotics
- attempts at self-treatment
- soaps/body washes
- laundry detergents

- sanitary products
  - pads
  - perfumed wipes
  - OTC feminine hygiene products

STI screening tool

Vaginal discharge without vulvar symptoms

- High vaginal swab for chlamydia, gonococcal, trichomonas and Mycoplasma genitalium NAAT testing

- High vaginal bacterial swab for microscopy and culture

- Speculum examination should be done
- Exclude pregnancy and foreign bodies
- Always consider Pelvic Inflammatory Disease

Empirical treatment may be given before results are back, depending on clinical suspicion.

See MSHC guidelines on vaginal discharge for more detailed information.

Also screen for other STIs; go to screening

Refer or call if: • atypical presentations or unclear diagnosis

For clinical advice, GPs call 1800 009 903

Available at : https://www.mshc.org.au/images/downloads/stiTool.pdf

High Vaginal Swabs or Speculum?

- HVS
- may miss
  - retained foreign body
  - cervical Pathology
    - mucopurent DC
    - cervicitis
    - cervical lesions

- Speculum
- Invasive and uncomfortable

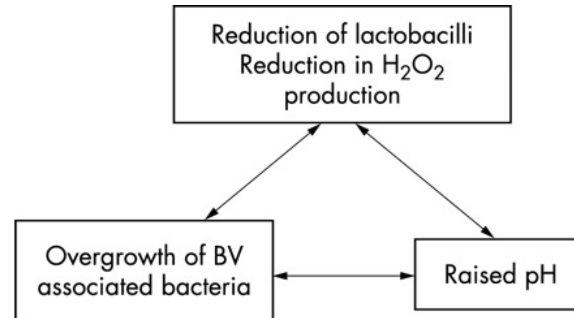
Investigations

- Point of Care (POC) tests:
  - vag pH
  - smear of vag discharge for gram stain
  - wet prep of vag discharge (+/- whiff test)

- cervical/ high vaginal swab for gonorrhoea/chlamydia NAAT
  - gonococcal MCS if GC suspected
- vaginal swab for trichomonas NAAT

Bacterial Vaginosis

- white/grey homogenous DC
- malodour
- itch/rash generally absent



Diagnostic Criteria

- Nugent Score
- Gold Standard
- Gram's Stain
  - Lactobacilli
  - Gardnerella
  - Mobiluncus

- Amsel's Criteria
- 3 out of 4 of the following,
  - vag pH > 4.5
  - homogeneous white vag discharge
  - Clue cells on gram stain
  - positive amine test

Nugent Score

Laboratory examination of vaginal smears and the determination of the Nugent Score N Score = The sum of the scores for each bacterial morphotype listed below. (Note Number of Organisms seen / 100X objective)						
Lactobacilli	SCORE	*Gardnerella, Bacteroides*	SCORE	Curved gram-negative bacilli	SCORE	Sum=*N-SCORE
30 or >	0	0	0	0	0	0
5-30	1	<1	1	<1	1	3
1-4	2	1-4	2	1-4	1	5
<1	3	5-30	3	5-30	2	8
0	4	30 or >	4	30 or >	2	10

*Interpretation of Nugent Score		
If N Score is:	AND:	Then Report:
0-3		Smear NOT consistent with BV
4-6	Clue Cells NOT present	
4-6	Clue Cells ARE present	Smear consistent with BV
≥ 7		

Case studies

Jenny

- 26yo heterosexual woman
- no RSP
- 4 male CSPs last 3/12
- 10 male CSP last 12/12

- presents with 6/7 of altered vaginal discharge: increased volume and a yellow colour with odour

Case 1….Consultation

- self-treated for ‘thrush’ with OTC fluconazole 4/7 ago with no effect
- LNMP 3/52 ago
- denies IMB/PCB
- OCP: Ethinyloestradiol/Levonorgestrol
- CST 8/12 ago: no high risk HPV detected

Examination

- vulva NAD
- introitus thin off- white discharge
- malodour
- speculum: thin off white discharge
- cervix: pink and smooth, small ectropion.
- vag pH 5.5

Investigations

- microscopy
  - smear of vaginal discharge microscopy
  - wet Prep of vaginal discharge
  - vaginal swab for trichomonas NAAT
  - Cervical swab for gonorrhoea/chlamydia NAAT

Microscopy Findings

HVS Microscopy

polys: occasional

Clue Cells: moderate

nugents score: 8

comments:

Lactobacilli: 0

Gardnerella: >=30/hpf

Mobiluncus: 0

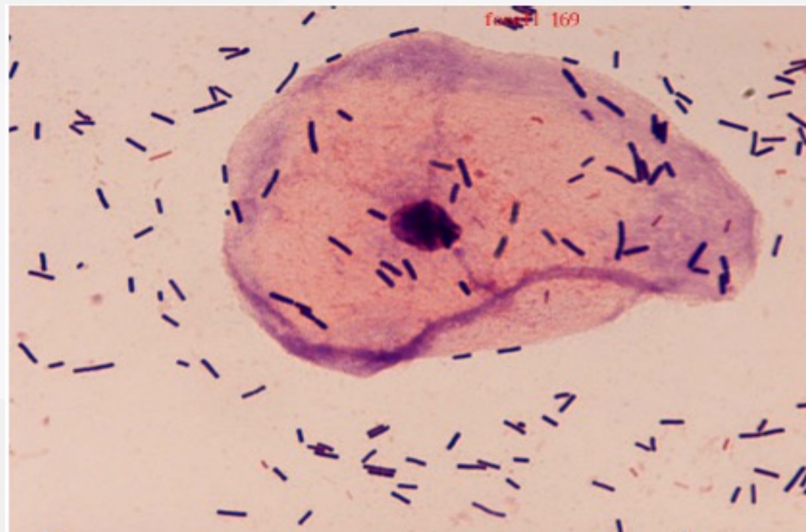
Bacteria List: GPCB, Mixed bacteria, Gardnerella

HVS Wet Prep

polys: occasional

amine: positive

Microscopy



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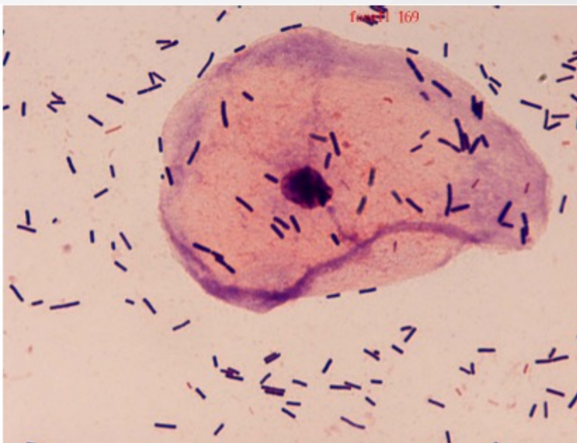
Amsels Criteria

- 3 out of 4 of the following,
  - vaginal pH > 4.5
  - homogeneous white vaginal discharge
  - Clue Cells
  - positive Amine



Treatment

- metronidazole 400 mg b.d. x 7 days
- partner treatment studies at MSHC
- treating when symptomatic only

Maria

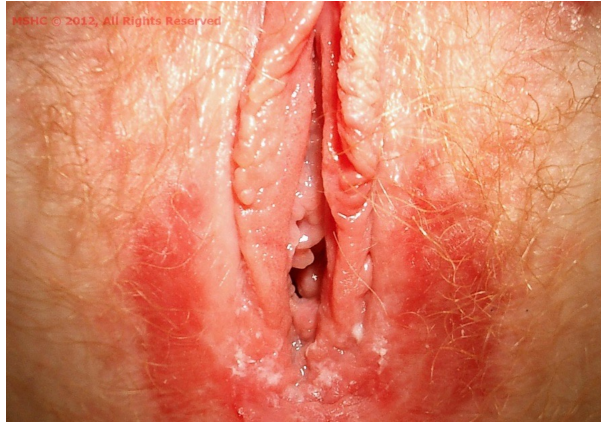
- 6 week history of recurrent vulval itch
- self treats with canesten
- Fluconazole 150 mg
- burning on passing urine
- vulva and vagina feels sore
- Dyspareunia
- no history of HSV
- RSP x 18 months
- redness of his penis only

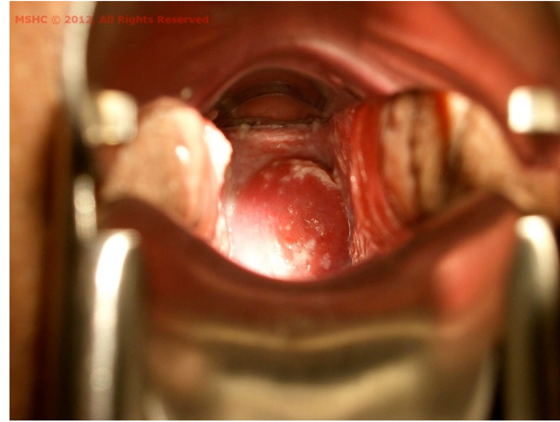
Examination

- erythema of vulva
- fissuring of both labia
- tenderness
- speculum: red vagina with thick discharge
- adherent to vaginal wall

- cervix: normal
- no mucopurulent discharge
- no CET
- bimanual nad

Vulvovaginal Candidiasis





Tests

- microscopy
- wet prep
- HSV and *Treponema pallidum* PCR (Syphilis)
- gonorrhoea/chlamydia NAAT
- MG testing?
- FBE
- Diabetes
- Iron studies

Microscopy

Treatment

- barrier cream-e.g. sudocreme
- genital hygiene
- Clotrimazole pessaries x 7 days
- Fluconazole 150 mg stat
- recurrent candidiasis:
  - Fluconazole 150 mg weekly x 6 weeks
  - review with microscopy to ensure suppression of candida spp