Colposcopic examination
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Aim
To describe the key features of the colposcopic examination
- Specula insertion
- Uterine cervix and vaginal almost upper third visualisation
- Speculoscopy
- Proceed to colposcopic examination
Objectives

- Describe/explain the design of the colposcope
- mobile, stereoscopic, binocular equipment
- 10 x magnification

Who undergo to colposcopic examination?

- Patients with cytologic abnormalities
- Patients with macroscopically suspected erythroplakia but also
- Patients with inflammatory changes of the uterine cervix and lower genital tract
- Patients with hormonal deficiency changes of the uterine cervix and lower genital tract
- Sexual abuse victims
Detail the basic requirements necessary for a colposcopy (focusing more on what is needed to enable good visualisation rather than emphasis on practical considerations such as information, counselling, communication etc)

The basic requirements necessary for a colposcopy

- What is needed to enable good visualisation?
- Excellent light
- Excellent optics
- Appropriate speculas and
- 3%-5% sol. acidi acetici
- Lugol’s 2% iodine solution
- Kogan’s endocervical speculum
Explain the key questions that must be addressed in any colposcopic examination

- accessibility of the uterine cervix
- accessibility of the upper third of vaginal vaults
- SCJ (Squamo Columnar Junction) visibility: entirely, partially, not visible,
- satisfactory or unsatisfactory SCJ visibility
- appropriate speculoscopic preparation
- appropriate lighting

Illustrate the SCJ and explain its significance

- pluristratified squamous epithelium meets monolayered cylindric epithelium
- underlying process: squamous metaplasia from monolayered pluripotent basal cells, from which due to chronic irritation emerge new squamous or cylindric immature cells very sensible to extraneous stimuli, outer world noxa, i.e. inflammatory irritation as HPV infection

- Pluristratified squamous epithelium meets monolayered cylindrical epithelium
- Underlying process: squamous metaplasia from monolayered pluripotent basal cells, from which due to chronic irritation emerge new squamous or cylindrical immature cells very sensible to extraneous stimuli, outer world noxa, i.e. inflammatory irritation as HPV infection

- Kogan's endocervical speculum enables better visualisation of endocervical part, as well as posthysterectomomic vaginal funnel
Explain how and why acetic acid is used

**HOW?**
- On the cotton stick emerged in 3%- 5% acetic acid solution, plaster all over cervical surface

**WHY?**
- Disrupted cell chromatin due to HPV infection cells process-damages, cells accept acetic acid solution demonstrating acetowhiteing, whose intensity depends on the intensity of HPV infection, ie: faster appearance and slower disappearance means higher grade of lesion, slower appearance and faster disappearance mean lower grade of lesion

**Explanation of Schiller’s iodine is used**

**HOW?**
- Cotton stick in 2% Lugol’s solution

**WHY?**
- Disturbed pluristratified squamous epithelium in cases of neoplastic changes has disrupted glicogene production, and these areas do not accept iodine solution, so that iodine negative areas are suspected to contain neoplastic change, but we face iodine negative areas also in cases of inflammation, as well as in women with hormonal deficiency

**WHEN Schiller’s iodine is used?**
- In every patient in whom after application of 3%-5% sol. acidi acetici we face with various signs of acetowhiteing under normal light, as well as facing with vascular disturbances (i.e. punctation, mosaicism, abnormal vascular changes)
Describe the different types of biopsy (CDB, excisional, extended)

- Punch biopsy and endocervical curettage
- Diathermy loop biopsy and endocervical curettage
- Cold knife excisional biopsy
- LLETZ procedure
- Cold knife conisation
- Cold knife amputation

Punch biopsy and endocervical curettage (equipment)
Tissue specimen for pathohystological analysis
Diathermy loop biopsy

Loop equipment with various dimensions of loops
It is possible to choose adequate loop due to dimension of cervical shape
Ball electrode for coagulation
Due to diagnostic therapeutic protocol it is not advisable to omit conisation-cone biopsy (either loop either cold knife) in selected cases because we can face with more serious diagnosis on the removed uterus

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Conclusive remarks

- **Aim**
  - To describe the key features of the colposcopic examination

- **Objectives**
  - Describe/explain the design of the coloscope
  - Detail the basic requirements necessary for a colposcopy (focusing more on what is needed to enable good visualisation rather than emphasis on practical considerations such as information, counselling, communication etc)
  - Explain the key questions that must be addressed in any colposcopic examination
  - Illustrate the SCJ and explain its significance
  - Explain how and why acetic acid is used
  - Explain how, why and when Schiller’s iodine is used
  - Describe the different types of biopsy (CDB, excisional, extended)

Thanks for Your attention