"COLPOSCOPY"

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- A choice of interesting colposcopic patterns is presented here in order to achieve better insight into this field of gynaecology
- Two case reports will also be reported, one is a woman with carcinoma cervicis uteri IIIA, and the other is a woman with recurrent cervical cancer in the posthysterectomic vaginal cuff

Presentation design

To present regular classification:

• Barcelona 2002

(Walker P, Dexeus S, De Palo G, † Barrasso R, Campion M, Girardi F, Jakob C, Roy M International Terminology of Colposcopy: An Updated Report From the International Federation for Cervical Pathology and Colposcopy Obstet Gynecol 2003,101;1: 175-7)

• To learn more from the following series of slides:

ABNORMAL CYTOLOGY IN POSTHYSTERECTOMIC VAGINAL CUFF

• The problem we face increasingly is abnormal cytology of posthysterectomic vaginal cuff including vaginal angles. In these cases I prefer to take a smear from the scar as well as from every angle with its own cytobrush.



ABNORMAL CYTOLOGY IN THE POSTHYSTERECTOMIC VAGINAL CUFF

 In case of abnormal cytology I perform colposcopy including the angles where Kogan's speculum allows better visualisation and localisation of the epithelial abnormality.



ABNORMAL CYTOLOGY IN THE POSTHYSTERECTOMIC VAGINAL CUFF

In this patient, a 50year-old female who had conisation ten years ago (histology showed CIN III), control cytology demonstrated VAIN III from the right angle. We suppose that ten years ago colposcopy of the cervix and vaginal upper third was not thoroughly performed.



The beginning of the operation (excisio probatoria cicatricis)

- Disinfection (Betadine 2% sol.)
- Eversion of the right vaginal angle with tenaculums, <u>curved left arrow</u>



Continued

 Eversion of the left vaginal angle with tenaculums, <u>curved left arrow</u>



Starting the excision

 Excision of colposcopically suspicious area in the right vaginal angle



Attention!

- Be cautious!
- Pay attention to the underlying anatomic structures of the bladder, *left arrow*, and bowels, *right arrow*!



Suturing

 Reconstructive sutures of the right vaginal angle, <u>down arrow</u>



Right angle tissue specimens for histology

 Tissue specimen for histology which later showed VAIN III (the right angle)



Left angle tissue specimens for histology

 Tissue specimens, histology later revealed acanthosis.





 Cytology control after three months showed no abnormalities from both the right and the left angle.

The next patient

 The anterior lip of the hypertrophic uterine portio in a 49-year-old female demonstrating large transformation zone.



 Kraatz green light allowed better visualisation of the large transformation zone, which in this picture seems lighter than the underlying cilindric (glandular) epithelium.



 After Schiller's probe there is a great iodine negative area, welldemarcated from the surrounding healthy epithelium.



 In the area from 6 to 9 o'clock the "gulf" arrangement of the overlying squamous epithelium is wellvisible.



 The same picture under Kraatz green light, better visible elements of the epithelium



• The same picture after Schiller's probe



 In the area from 8 to 9 o'clock near the external cervical orifice, a finger-like overlying epithelium with slightly changed vascular pattern is visible.



• The same area under Kraatz green light



• The same area after Schiller's probe



The patient with a malignant disease of the uterine cervix

 A 39-year-old woman with carcinoma cervicis uteri II A. The anterior lip oedematous with abnormal hypertrophic vessels and centripetal debulking neoplastic vulnerable mass, histology confirmed carcinoma planocellulare corneum. Patient underwent radiochemotherapy.



• The same picture in Kraatz green light



 The posterior lip of the cervix in the same patient (striped right arrow)



 The same picture under Kraatz green light
(striped right arrow)



The following patient:

Patient with a recurrent disease on the vaginal posthysterectomic scar

Recurrence of the disease in the vaginal scar

- Recurrence of the disease in the vaginal scar is a complex problem (circular arrow)
- From what at first view is a normal scar, we saw desquamation of suspicious detritus



- Colposcopy of the scar enables us to see the point of discharge(circular arrow)
- After that we can take a cytobrush specimen, or by cochlea gently "penetrate" the carcinomatous mass to get a better sample for histologic examination



 MRI in this patient shows the extensity and the location of the recurrent disease of the posthysterectomic cuff in order to plan appropriate actinotherapy (bent-up arrow)



Conclusion

- We point out the use of modern techniques, the acceptance of modern colposcopic classification, which enables us to suspect the pre-invasive lesions
- It enables targeted biopsy
- In IB-IIA cervical cancer stage, colposcopy may be worthwhile in order to locate the extent of the vaginal cuff which has to be included in radical hysterectomy
- All above points out colposcopy as a cooperator of gynecology

Another patient with a malignant disease of the uterine cervix

 Another patient, a 44year-old woman with carcinoma cervicis uteri FIGO II B, hystology showed carcinoma planocellulare corneum, she underwent radiochemotherapy, satisfactory outcome



• The same picture, Kraatz green light



Problems of colposcopy in pregnancy

This part of colposcopic examination shows cervical papilloma in pregnancy, CIN II on biopsy (the white line demonstrates the border between the papiloma and healthy cervical tissue, while the blue oval demonstrates the bloodish part of the papilloma)



Pregnancy - continued

• The same after Schiller's probe



LETZ (Loop Excision of the Transformation Zone), loop conisation, loop electrosurgical procedure, loop excision, diathermy excision etc.

 Uterine cervix immediately after loop conisation


Cervical healing and a better visible capillary net on the cervical surface



Clinical problem: a 38-year-old nulliparous woman, expresses wish to give birth, cytology and histology variations, first LETZ unsatisfactory!?

 In a 38-year-old nulliparous woman colposcopic control was performed because of abnormal cytology (varied from ASCUS to CIN III) after LETZ.



Clinical problem: a 38-year-old nulliparous woman, expresses wish to give birth, cytology and histology variations, first LETZ unsatisfactory!?

In the series of the following pictures it is possible to see areas out of the squamocolumnar junction and more in the transformation zone showing thick acetowhitening, capillary net disturbances and great iodine negative areas.



Clinical problem - continued

 The greatest dilemma was what to perform after two years of the follow up



CIN II



- Cellular multiplication,
- layers' disarrangement
- as well as nuclei polarity.
- Cellular disorganisation in 2/3 of lower regular layer.

- The same picture under Kraatz green light, with well-visible areas of partially abnormal capillary arrangements. This is probably because of:
- A) healing processes,
- B) possible recurrent lesion,
- C) possible reinfection, or
- D) possible estrogen variations and consecutive healing disarrangement.
- A great dilemma, a complex problem.



 This iodine negative area with iodine positive islets leads to the presumption on either a reinfection, or epithelial changes that ocurred beacuse of a recurrent lesion, taking in mind that the lesion was not completely removed in previous treatments.



 Special attention has to be given to the anterior lip of the portio in the same patient with a slightly disturbed capillary net area which reaches the vaginal fornix like a triangle.



 The same picture under Kraatz green light



- After Schiller's probe one can see a triangle-like iodine negative area.
- Be cautious, because no aggressive manipulation is permitted, taking in mind the proximity of the bladder and the urethra.
- This picture points to the congenital transformation zone.
- It is a question whether this change was present prior to the loop excisions performed.



- In the area from 6 to 9 o'clock a discrete capillary network in the acetowhite epithelium is visible (curved up arrow)
- The whole area is surrounded by healthy epithelium.



 The same area, Kraatz green light (curved up arrow)



 The same area after Schiller's probe with an iodine negative field with a welldefined iodine positive islet (curved up arrow)



- The following area from 3 to 6 o'clock demonstrates discrete acetowhitening well-defined in relation to the surrounding epithelium (curved left arrow).
- Squamocolumnar junction - yellow scribble



- The same area Kraatz green light (curved left arrow).
- Squamocolumnar junction - yellow scribble



 The same area after Schiller's probe with an iodine negative field

(curved left arrow)



 The posterior lip of the portio in the same patient, showing acetowhite area with a discrete capillary arrangement from 3 to 9 o'clock

(yellow scribble)



 Under Kraatz green light a capillary network in discrete acetowhite field is more visible (curved left arrow))yellow scribble).



- After Schiller's probe there is a clear demonstration of the iodine negative area with well-visible islets of iodine positive epithelium.
- Squamocolumnar junction: green scribble, iodine positive areas: white scribble, minor iodine negative area: red scribble, major "sfumato" iodine captured area: blue scribble



Clinical problem - continued

- After LETZ, cold knife conisation was performed (CIN III)
- The healing process was satisfactory
- Two years ago, at the age of 44, she gave birth to a healthy baby.
- This gave us great professional and human satisfaction.

Control examination 18 months later

- **Per speculas:** Satisfactory healing of the vaginal cuff
- <u>Bimanual palpation</u>: vaginal and rectal palpation revealed no parametrial infiltration
- <u>Abdominal CT</u>: there were no enlarged para-aortal lymph nodes
- <u>Pelvic CT</u>: there were no enlarged lymph nodes, and no reccurence of the primary process

New colposcopic images, the socalled satellitic lesions, areas?

- The so-called satellitic multiple acetowhite areas with clear boundaries (*curved right arrow*)
- Squamocolumnar junction - <u>white</u> <u>scribble</u>



Satellitic areas - continued

 Satisfactory visibility under Kraatz green light



Satellitic areas - continued

 Schiller's probe positive, histology revealed CIN I + papilloma endophyticum



"Glandular openings"

 Cytology showed CIN II, colposcopy revealed fully visible squamocolumnar junction and glandular openings on the anterior lip in the transformation zone (right curved arrow)

"Glandular openings" - continued

 The same under Kraatz green light (bent arrow)



"Glandular openings" - continued

- The same after Schiller's probe (bent arrow)
- Squamocolumnar junction - <u>white</u> <u>scribble</u>
- Histology revealed
 CIN II



Histology: I expected a glandular lesion, but on a biopsy specimen it was CIN II

 Can we speak of characteristic colposcopic pattern of a glandular epithelium lesion?







Placental tissue

Placental tissue specimen ISH

- HPV DNA 31/35/51 hybridisation signal in X cells of uteroplacental blood vessel in basal placental plate
- The same vessel augmentation under a microscope





Placental tissue specimen ISH

Hybridisation signal HPV DNA 31/33/51 in extravillous trophoblast tissue



POSSIBILITIES OF HPV INFECTION TRANSMISSION FROM MOTHER TO NEWBORN?

Possibilities of HPV infection transmission:

Horizontal way (per continuitatem) amniotic fluid, *left arrow*, fetus by swallowing amniotic fluid, *right arrow*

Everyday practice questions:

- HPV in pregnancy and sequelae for newborn?
- Possibilities of HPV infection transmission:
- Horizontal way (per continuitatem) uterine cervix, <u>bent- up arrow</u>
- fetal membranes, amniotic fluid, fetus by swallowing amniotic fluid, <u>curved left arrow</u>





Possibilities of HPV infection transmission:

 By vertical way from mother to newborn through birth pathways, <u>curved up</u> <u>arrow</u>



Fig. 189. Einschneiden des Kopfes in Hinterhauptslage. Das Okziput ist bis zum Nacken unter der Schossfüge entwickelt, die Stirne hat die Steissbeinspitze passiert, es beginnt die 3. Drehung: Deflexion.

Newborn status after delivery with regard to smears taking in order to elucidate possibly HPV infection presence:

- Neonate status
- Nasopharyngeal smears
- Anogenital region smears
- Nasopharyngeal and oesophageal smears
- Cooperation between neonatologist and obstetrician
I always point out the following:

"Non ancilla, sed adiutrix gynaecologiae colposcopia!"





